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# ELEMENTS OF ECONOMICS

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# ELEMENTS OF ECONOMICS

## WITH SPECIAL REFERENCE TO AMERICAN CONDITIONS

*FOR THE USE OF HIGH SCHOOLS*

BY

HENRY REED BURCH, PH.D.

HEAD OF DEPARTMENT OF HISTORY AND ECONOMICS
CENTRAL MANUAL TRAINING HIGH SCHOOL
PHILADELPHIA

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To

THE MEMORY OF

H. B. C.

# PREFACE

THE growing importance of the newer economics makes necessary a simple statement of its fundamental principles. The present work, designed especially for the use of secondary schools, has been prepared with this object in view. Since the book is intended primarily for the beginner, every effort has been made to secure simplicity of treatment.

This simplicity manifests itself chiefly in two directions. In the first place, emphasis has been laid upon the concrete and descriptive side of economics. Great attention, therefore, has been paid to the subject of the production of wealth, and much material of an industrial character has been added. In the second place, each chapter is preceded by an outline of its contents and followed by a series of questions which bear on the general topic of the chapter. In those schools where only a very limited amount of time can be devoted to the study of economics, it will be found possible to omit or summarize certain parts of the book according to the special needs of the students, or the particular inclination of the teacher.

To those who have come under the inspiring influence of Professor Simon N. Patten, it is almost superfluous to acknowledge here the debt of obligation embodied in this work.

PHILADELPHIA, April, 1912.

# CONTENTS


PAGE

INTRODUCTION . . . . . xiii

## PART I

### ECONOMIC IDEALS

CHAPTER

I. THE GOAL OF ECONOMIC ENDEAVOR . . . . . 1

II. ECONOMIC IDEALS . . . . . 8

## PART II

### CONSUMPTION OF WEALTH

III. PROBLEMS OF CONSUMPTION . . . . . 20

IV. THE PROBLEM OF THE STANDARD OF LIVING . . 31

V. WAGES AND STANDARDS . . . . . 37

## PART III

### THE PRODUCTION OF WEALTH

#### BOOK I. THE FACTORS OF PRODUCTION

VI. NATURAL RESOURCES OF THE UNITED STATES . . 45

VII. LAND RECLAMATION . . . . . 55

VIII. FOREST RESOURCES . . . . . 62

IX. WATER RESOURCES . . . . . 69

X. AMERICAN LABOR . . . . . 78

XI. IMMIGRATION . . . . . 88

XII. THE RISKS OF LABOR . . . . . 94

XIII. SOME LABOR PROBLEMS . . . . . 103

CHAPTER PAGE
XIV. EDUCATION OF THE WORKER . . . . . 113
XV. CAPITAL . . . . . 120
XVI. THE SOCIAL SURPLUS . . . . . 132

BOOK II. PRODUCTION IN THE UNITED STATES

XVII. AMERICAN AGRICULTURE . . . . . 138
XVIII. SOIL FERTILITY . . . . . 146
XIX. THE PRODUCTION OF NEW SPECIES . . . 152
XX. AMERICAN INDUSTRY . . . . . 158
XXI. LARGE SCALE PRODUCTION . . . . . 167
XXII. BUSINESS ORGANIZATION . . . . . 174
XXIII. THE INDUSTRIAL ARMY . . . . . 182
XXIV. TRANSPORTATION . . . . . 189
XXV. REGULATION OF TRANSPORTATION . . . . 198

PART IV

EXCHANGE OF WEALTH

XXVI. VALUE AND PRICE . . . . . 206
XXVII. PRICE AND MONOPOLY . . . . . 214
XXVIII. INSTRUMENTS OF EXCHANGE . . . . . 222
XXIX. MODERN FINANCE . . . . . 232
XXX. FOREIGN TRADE . . . . . 240
XXXI. TAXATION . . . . . 248

PART V

THE DISTRIBUTION OF WEALTH

XXXII. PRELIMINARY SURVEY OF DISTRIBUTION . . 255
XXXIII. THE THEORY OF RENT . . . . . 265
XXXIV. THE THEORY OF INTEREST . . . . . 274
XXXV. THE THEORY OF PROFITS . . . . . 281

| CHAPTER | | PAGE |
|---|---|---|
| XXXVI. | THE THEORY OF WAGES | 288 |
| XXXVII. | THE OUTLOOK FOR DISTRIBUTION | 296 |


## PART VI

## ECONOMIC EXPERIMENTS AND PROGRAMS


| | | |
|---|---|---|
| XXXVIII. | EXPERIMENTS OF THE EMPLOYER | 304 |
| XXXIX. | EXPERIMENTS OF THE WORKER | 316 |
| XL. | THE PROGRAM OF REGULATION | 329 |
| XLI. | PROGRAMS OF SOCIALIZATION | 337 |
| XLII. | SOCIAL AND ECONOMIC PROGRESS | 348 |

# INTRODUCTION

EVERY subject of study has its particular field of inquiry. Thus, mathematics arises from a study of form and number and includes, among other subjects, a fundamental knowledge of geometry and algebra. Physics, in a similar manner, investigates the general realm of matter and leaves to chemistry a more careful analysis of the elements and their compounds. Likewise, history concerns itself with the general development of mankind along political, industrial, and social lines; while civics deals with the more special study of government. In studying economics, we shall find that, in exactly the same manner, this subject further specializes in a field peculiar to itself and rests upon a basis distinct from that of every other science.

The rapidly growing importance of economics and its vital connection with everyday life combine to make it highly desirable for all wide awake people to understand something of this science and to grasp clearly its fundamental characteristic. Economics arises from the study of wealth and investigates the problem of welfare. Of course welfare, from the standpoint of material well-being, is not possible without wealth. Therefore, in order to understand the objective basis of economics we must have a clear conception of the meaning of wealth.

Wealth may be either material or immaterial. For example, houses, factories, food, and clothing are articles of

material wealth; while health, capacity, and character are illustrations of immaterial wealth. Both kinds of wealth possess value, but immaterial differs from material wealth in that it cannot be subjected to the process of exchange; that is, immaterial wealth cannot be bought and sold like food and clothing. It is needless to say that immaterial wealth is of greater value than anything else in life. However, a study of this kind of wealth does not properly belong to the field of economics, but is a legitimate part of the science of education, or of psychology, or of ethics, or of some similar study. Nevertheless, when immaterial wealth is productive of material wealth, economics becomes indirectly interested in the solution of some of its problems. For example, if education produces efficiency and efficiency results in the production of material wealth, economics acquires an indirect but real interest in the growth of education. That is, just as wealth is a means of promoting welfare, so may education increase the amount of wealth produced by society.

However, economics is primarily concerned with material wealth, and it is therefore imperative for the student to have a clear conception of its essential characteristics. In the first place, material wealth may be bought and sold; that is, its ownership may be transferred from one individual to another. We have just seen that this characteristic is distinctive of material wealth. The strength of a Hercules, the genius of a Shakespeare, or the honesty of a Lincoln can never be transferred from one person to another. On the other hand, the palaces of kings, the paintings of old masters, or the products of a steel mill may easily pass from the hands of one into the possession of another. It is always possible, therefore, for material wealth — no matter

what its character or how high its value — to be exchanged for some other commodity of equal value.

But material wealth possesses something more than this element of transferability; it possesses the quality of satisfying human wants. Some things are easily transferred from one person to another, or from one place to another, and yet do not satisfy any individual want. For example the dirt of the street is only too easily brought into the home, but it is not material wealth because it satisfies no one's want. However, this same dirt, needed by the contractor in large quantities, would satisfy an individual want and would in this case be regarded as material wealth. This want-satisfying quality possessed by material wealth is called utility. While degrees of utility possessed by different articles may vary greatly, yet all forms of material wealth must possess some utility. It may readily be seen that necessities of life, such as food, housing, and clothing, possess the greatest possible utility; that is, they satisfy wants that are most intense and universal in all mankind. On the other hand, automobiles, books, or fine pictures satisfy wants that individuals have gradually acquired, but that are not absolutely essential to life itself. In both cases, however, these different forms of material wealth possess utility; that is, they all satisfy, in a greater or less degree, the wants of mankind.

In addition to the qualities of transferability and utility, material wealth must possess still another characteristic. The wealth with which economics is concerned must involve human effort. Locomotives, footballs, chemical apparatus, maps, textbooks, clothing, and thousands of other commodities are all produced by man's conscious industrial effort; that is, they are all "economic goods." In the

same manner, in the production of commercial coal and iron and in the working up of other raw materials of industry, man's labor is an essential element in the finished product. When individuals appropriate gifts of nature, such as forests and minerals, they transform them through their industrial effort into economic goods. On the other hand, such free gifts of nature as air and sunshine cannot easily be appropriated and, although they possess the highest possible utility, their existence is not the result of any human effort. Air and sunlight are not manufactured, therefore we cannot properly regard them as economic goods. Water, on the other hand, while a free good in primitive society, becomes an economic good in the modern city because human effort has been expended in building aqueducts, laying water mains, and otherwise providing a water supply. Free gifts of nature tend to become economic goods; but, so long as they remain "free" and do not form an actual basis for industrial effort, they do not constitute a part of that wealth with which the study of economics is primarily concerned.

From this discussion, therefore, it may be seen that material wealth — the physical basis of economics — is a term applied to all economic goods, that is, to those goods which may be transferred from one individual to another, which satisfy human wants (or possess utility), and which represent some industrial effort.

The beginner in the field of economics must bear in mind not only this concept of material wealth, but he must also clearly understand the relation between wealth and money. One of the first errors into which he is likely to fall is the belief that these two are synonymous, and that, therefore, a study of economics is merely a study of "How to make money." Such a misconception must be immediately

corrected. Material wealth includes infinitely more than money, and the study of economics is therefore infinitely broader than an ordinary lesson in money-making. The popular misconception of the importance of money arises from the simple fact that money is employed by civilized societies as a standard of measuring the value of all economic goods and as a means of exchanging one form of wealth for another. Gold and silver, from which money is coined, are forms of material wealth; but so are iron and coal, furniture and clothing, food and drink, books and pictures, and countless other economic goods. It is therefore just as absurd to think of money as inclusive of all wealth as to think of one individual as embracing the human race.

Material wealth, then, is the concrete basis of economics. Without material wealth no science of economics would be possible. But a knowledge of wealth, in and of itself, is not the highest aim subserved by a study of economics. Wealth is but a means to welfare, and the real purpose of the study of economics is to understand how welfare may be promoted through the medium of wealth. Accordingly, in our treatment of economics, we shall discuss (1) the ideals necessary to attain this goal of welfare; (2) the means of promoting welfare through the consumption, production, exchange, and distribution of wealth; and (3) the various efforts of men, individually and collectively, to realize the economic ideal and to attain the goal for which all are striving.

# ELEMENTS OF ECONOMICS

## PART I

## ECONOMIC IDEALS

### CHAPTER I

### The Goal of Economic Endeavor

I. What is our goal?
   1. In play:
      *a.* Success
      *b.* Achievement
   2. In life:
      *a.* The production of wealth
      *b.* The promotion of welfare
   3. The old view and the new

II. How to attain this goal
   1. Through opportunity:
      *a.* Its meaning
      *b.* Its possibilities in America.
      *c.* Its real significance:
         (1) The older attitude
         (2) The newer view
   2. Through adjustment:
      *a.* Its meaning
      *b.* Its existence in nature
      *c.* Its never ending character
      *d.* Its prerequisite

**What is Our Goal?** — A baseball team may aim to pile up a big score, or it may aim to play a good game. The

big score is success; the good game is achievement. The team that aims to pile up big scores wants games with weak opponents; but the team that aims to play a good game desires in its adversaries equal, if not greater skill. The big score team triumphs, while the good game team learns. The latter may lose every game of the season, and yet attain a proficiency in baseball far above that of the former team.

**In play:** *Success or achievement.*

It is thus entirely possible to play baseball for scores or to play for the love of a good game. Exactly the same possibilities present themselves in the economic world, except that the choices are rather more numerous and complex. For example, a man may have as his aim in life any one of the following objects of economic endeavor. He may strive for money, the counters of the economic game, and, like the miser, hoard them and gloat over them. Or he may overlook the counters and work for the things which the counters represent, — the wealth of society. Again, a man may have for his object the satisfaction of his wants; in which case he works for the counters, exchanges them for the wealth, and thus, by the possession and use of the wealth, satisfies the wants which led him to work.

**In life:** *The production of wealth.*

Many men, however, have as the chief object in life the attainment of progress, — a forward movement of the entire group to which they belong. If a large group is striving for progress, civilization will be advanced and the welfare of each member of the group will be augmented. Of course, in order to secure progress, it will be necessary to use money and wealth in order to satisfy the wants of the individual; yet there is just as wide a difference between working for wealth and working for

*The promotion of welfare.*

welfare as there is between playing baseball for scores and playing to play a good game. In the first case man works for counters; in the second, for development.

Economics is not merely "the science of wealth" but is becoming more and more "the science of welfare." The early idea was that economic goods are the logical end of economic endeavor; that the nation which is producing economic goods in great abundance is a successful nation, irrespective of any other test. The newer view holds, on the other hand, that true advancement lies, not in the production of goods, but in developing the lives of men and women, and that, while this end may be achieved through the production of goods, the production is merely incidental to the development of manhood and womanhood. Production is not an end in itself, but merely a means to welfare.

**The old view and the new.**

**How to Attain this Goal.** — The attainment of welfare — individual and social well-being — depends in the first place upon opportunity; in the second place upon adjustment. Let us examine briefly the part played by each of these factors in individual and social welfare.

Opportunity is an equal chance given to the members of each generation to become unequal. Far from signifying equality, opportunity involves only the thought that each person shall have an equal start. The "starter," who shoots the pistol for the mile run, does not make the runners equal when he insists that each start at the same time from the same mark. On the contrary, he gives the contestants a fair chance to show how unequal they are. Those who urge the necessity of opportunity are doing no more than the "starter," — insisting that each contestant in the race of life shall start, fully prepared, with an equal chance to do good work.

**Through opportunity:** *Its meaning.*

As a nation, America to-day presents rare opportunities. Contrast, for a moment, the conditions of the eighteenth century with those of the twentieth. In 1700 capital was scarce, living was precarious and, in order to secure even the bare necessities of life, men, women, and children were forced to work hard and continually. In 1900, however, the inhabitants of the United States have abundant capital and a marvelously developed system of wealth production. The bare necessities of life, and some of the comforts as well, can be supplied in an eight-hour working day for adults, while the children attend school. In 1700 the possibilities for opportunity were limited; in 1900 they have increased a hundredfold.

*Its possibilities in America.*

The real significance of this new opportunity is augmented by the modern view of man's possibilities. Modern science justifies the belief that, within racial lines, most men are born approximately equal and normal; hence opportunity is the chief factor in human development.

*Its real significance.*

This view was not always held. Even to-day people believe in total depravity. Under this hopeless view of the human race, some men are depraved, sinful, wicked; others are shiftless, lazy, inefficient, and poor; while the fortunate ones are wise, capable, and efficient. During the centuries when this view was prevalent, birth was looked upon as the determining factor. This attitude toward life was an attempt to justify existing conditions; it led to submission and despondent resignation. It was all but fatalistic.

In the course of time, however, thinkers arose and proclaimed the doctrine of the equal distribution of human capacity. Such men talked of the right to life, liberty, and

the pursuit of happiness, and asserted that all men are created free and equal. Equalize Opportunity, proclaimed these " free and equal " thinkers, and, to a great extent, you equalize achievement. Birth — heredity — was no longer the key to the situation; it was now to be found in opportunity and environment. This view of human life is full of promise and inspiration, transforming men from fatalists into enthusiastic workers. According to its teaching, perhaps nine-tenths of all men and women, in a given grade of civilization, are born with about the same capacity to do good work.

Take, for example, two boys of equal ability, born on the same day. In the course of their lives, one is sent to high school and college and does splendid work in the world; the other is badly fed, poorly clothed, and sent into a cotton factory at the age of twelve. The first boy, because he had a chance, developed in exactly the same way that the second boy would have developed had a chance been given to him. An overwhelming majority of people, like these two boys, are normal at birth and if given an opportunity will lead normal, happy lives.

Welfare can be secured only when a normal relation is established between men and their surroundings. The establishment of a normal relation between men and their surroundings is called adjustment. If men live in poverty when the world about them is rich and fertile, there is maladjustment; but if the wealth of the community is so divided that men and women are living in comfort, adjustment has been secured. The aim of adjustment is to change unfavorable conditions so that men may lead normal, happy lives. Adjustment, therefore, involves an approximation to the normal.

**Through adjustment:** *Its meaning.*

The phenomenon of Adjustment is seen in nature as well as in society. A river, for example, adjusts itself to the changes in earth formation. If a mountain range is thrown up, the river wears down its bed until, flowing at a normal gradient, it has created a canyon of the Colorado. But the river is not content. It continues its work, cutting away the surrounding hills, until it flows through a great plain like the Mississippi Valley. Society, like the river, seeks to adjust itself to the changing contour of the environment by wearing it away and smoothing it down until a normal relation is established between men and their surroundings. It accomplishes its purpose by means of men and women all working together, coöperating to remove the obstacles in the path of progress.

*Its existence in nature.*

The process of adjustment is continuous because the normal is always changing. The unattainable of one age is the attainable of the next. Through science, invention, education, and the creation of surplus wealth, the dreams of the past, — the abolition of slavery, freedom from overwork, from cold and hunger, from famine and pestilence, — become the realities of the present. Thus the possibilities of human life are ever widening.

*Its never ending character.*

Men and women, therefore, who have the welfare of society truly at heart are continually striving to shape social conditions so that every one may be happiest and most effective. If enough people work for such an end, the full possibilities of society will be realized and the normal for that community will be attained. But to secure this adjustment, — to guarantee the welfare which is the goal of economic endeavor, — man must first be given opportunity.

*Its prerequisite.*

## TOPICS FOR CLASS DISCUSSION

1. What economic goal have you in view?
2. What are your reasons for having any goal?
3. What should determine the choice of a goal?
4. Would you be willing to take a "cinch" job with a big salary?
5. What does "opportunity" mean?
6. Should any limit be placed on opportunity?
7. Would not the opportunity of the few be limited if opportunity were provided for the many?
8. What is the object of maintaining unlimited opportunity?
9. What part can an individual play in securing adjustment?

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## CHAPTER II

### Economic Ideals

I. Efficiency
   1. Its meaning
   2. Its importance:
      *a.* To the employer
      *b.* To the worker
      *c.* To the nation
      *d.* To the family
   3. How secured

II. Conservation
   1. Its meaning
   2. Its threefold aspect:
      *a.* Conservation of natural resources:
         (1) Forests
         (2) Minerals and water power
      *b.* Conservation of industry
      *c.* Conservation of vitality:
         (1) Health
         (2) Life

III. Prosperity
   1. Its meaning
   2. National prosperity — How China compares with the United States:
      *a.* In population
      *b.* In race
      *c.* In natural wealth
      *d.* In industrial development
      *e.* In transportation facilities
      *f.* In tradition

*g.* In controlling environment:
  (1) In regard to rivers
  (2) In variety of food
*h.* In social surplus:
  (1) Its origin
  (2) Its forms
  (3) Its good results
3. Individual prosperity
4. The conclusion

We have seen that the road to welfare lies through opportunity and adjustment. To arrive at his journey's end, however, man must learn the lessons of efficiency, conservation, and prosperity.

**Efficiency is the Capacity to secure a Maximum Return for a Minimum Outlay.** — Hence, one man is more efficient than another if, with a given expenditure of energy, time, and material, he can produce a larger or better result than the other. For example, where two men are making Belgian blocks, one produces sixty while the other, without putting forth any additional effort, makes a hundred. The first man was clumsy with his hammer; the second made every blow count. The second man was therefore more efficient than the first.

**Its meaning.**

Every progressive employer is interested both in his own efficiency and in that of his workmen. In fact, the efficiency of his employees is a measure of his own capacity; for unless he secures a maximum return for a minimum outlay of administrative ability, he himself is inefficient. If he has a man soldering lanterns who makes ten motions to the lantern, while the job can be done in eight, he is losing some product every hour of the day through this man's inefficiency. Or, if

**Its importance:** *To the employer.*

he is using old, out of date machinery when more effective machinery can be secured, or if his plant is poorly arranged, he is inefficient because he is failing to secure a maximum return for a minimum outlay.

*To the worker.*

The worker is no less interested in efficiency than his manager, because his welfare is as equally dependent upon it. The workers are divided into groups whose boundaries are measured in terms of efficiency. At the bottom are those who are living on the ragged edge of existence, who are always losing their positions because of their incompetency. Then come those who "stick," — who retain their positions but never rise. Next come those who advance, but slowly. Finally, at the top, are those workers who are always advancing and progressing because they are always increasing their efficiency.

*To the nation.*

Efficiency may also be considered from the standpoint of the nation. Uncle Sam may well ask, "Is this country efficient? Are all industries doing efficient work? Are our railroads efficiently managed? Is our school system an efficient one?"

But why these questions?

"Because," says Uncle Sam, "there is a patch of country over toward the East called Germany, and a little island over here in the West called Japan, and both are becoming marvelously efficient."

And then Uncle Sam adds: "I happen to want to sell a few of my products over in the East and back there in the West, but unless I can run my country as efficiently as they can, I'm afraid my markets are done for."

Finally, we may look at efficiency from the standpoint of the home. If it is necessary that the father be able to produce efficiently in order to support his children, it is no

less necessary that the mother buy and keep house efficiently in order that the income of the father may be used in the most advantageous manner. Efficiency in the home is just as important as efficiency in the factory, — more so, perhaps, in view of the many bad digestions and spoiled dispositions that have grown up with inefficient home management. *To the family.*

No matter, therefore, from what standpoint we view this question we see its far-reaching importance; and it acquires this importance because social welfare depends largely on efficiency. When a nation is efficient, producing many goods cheaply and easily, it creates the possibility of universal prosperity in which all may share. Since efficiency is merely good sense plus good training, it can be assured only through the maintenance of a successful educational system. **How efficiency is secured.**

**Conservation means Wise Use.** — It is the complement of efficiency. Efficiency is measured by a maximum of result; conservation, by a minimum of waste. Although conservation is usually associated simply with natural resources, *i.e.* minerals, forests, water power, etc., it really includes (1) natural resources, (2) industry, (3) vitality. **Its meaning.**

The conservation of natural resources began with the care of forests which were so ruthlessly destroyed from colonial times to the end of the nineteenth century. Forests had been literally "butchered," — all trees, young as well as old, being cut or destroyed. Then, too, forest fires of terrible proportions raged every year throughout different areas, destroying lives and property, as well as completing the forest destruction which the timber butchers had begun. Gradually, as the forests *Conservation of natural resources.*

disappeared and the price of lumber rose, it became apparent that, unless the forest waste was stopped, a time would come, and that very shortly, when there would be no more wood.

Although the idea of conservation of natural resources related originally to forests, it has been expanded until, to-day, the nation is fully aroused to the necessity of conserving all of its natural wealth. Forests even if permanently destroyed might be replaced, but minerals are not replaceable, and water power, upon which industry must more and more depend as coal rises in price, may be monopolized and taken out of the hands of the people. Everywhere conservation is essential.

Industry, too, offers opportunities for the conservationist. For years, mining companies threw carelessly aside the finer bits of anthracite coal which have since proved of such value in making steam for office buildings and factories. The refuse from slaughterhouses, formerly thrown away, is now converted into a hundred different kinds of products in great packing houses which "use every bit of a hog except the squeal." Hoofs, horns, hair, bristles, bones, blood, sinews, fat, hides, intestines, — all have some destination, while the refuse which remains is converted into fertilizer. New inventions, perfected devices, new processes of manufacture, all help in the conservation of industry.

*Conservation of industry.*

But most important of all is the problem of the conservation of men and women. As Ruskin has well pointed out, men and women are the most important resource. "There is no wealth but life." Hence, if a nation would be truly efficient and prosperous, it must use wisely the men and women of each

*Conservation of vitality.*

generation. This conservation of vitality may take the form of conserving health or of conserving life.

As sick people cannot do their best work, a nation of sick people can scarcely be described as efficient. In the United States it has been estimated that the average adult is sick in bed four or five days during each year; while headaches, colds, and such minor ailments keep him from work another three or four days. If, then, there are thirty million adults at work and each one loses seven days a year, the total loss, irrespective of the loss of health and the cost of drugs and medical attendance, is two hundred and ten million working days each year. If half of this sickness is preventable, the nation is deliberately losing more than a hundred million working days annually because of its failure to adopt the simplest health precautions, such as clean water, pure milk, clean streets, airy houses, and the like.

In the same way, the average length of life might be greatly increased by preserving health and preventing accidents. Perhaps half of the deaths occurring annually in the United States are preventable, and would be prevented if a wise conservation policy were adopted. At present, the average length of life in the United States is about thirty-five years. It might be seventy.

So, in various fields, opportunities offer themselves for conservation of natural resources, of industry, and of vitality. One of the objects of economic endeavor is the adoption of steps that will insure this conservation.

**Prosperity signifies an Abundance of Economic Goods.** — Hence prosperity is an indication of welfare; just as fame and honor are signs of great achievement. **Its meaning.**

The meaning of prosperity will be made clear by a contrast between China and the United States. The first, a

land of wants; the second, a land of plenty; the first, a nation of deficit; the second, a nation of surplus. China and the United States, though equally endowed by nature, represent wide extremes of poverty and prosperity. Why is this?

**China and United States:**

In China there are four hundred million people, or four times as many as there are in the United States. If the whole population of the United States and forty millions more were to move into the State of Texas, they would be about as close together as are the people in the Yang-tse-Kiang-Valley of China.

*Population.*

The Chinese belong to the Mongolian race. They are smaller than the Caucasians physically, but the experience of the last twenty years in the development of Japan, whose people are admittedly not above the Chinese in capacity, has shown that intellectually they are at least the equals, if not the superiors, of Western races. Within a generation the Japanese have acquired a knowledge of industry and science that the Western races labored two hundred years to develop. In the late Russo-Japanese war, the Japanese loss through disease was almost nothing, while among the Russian troops in that war, the American troops in the Spanish-American War, and the British troops in the Boer War, the death roll from disease was appalling. This is only one instance in which the Japanese have bettered their instruction, proving the inherent capacity of the Mongolian race.

*Race.*

China possesses natural wealth, which is equal, if not superior, to that of any like area in the world. The country is magnificently watered. The Yang-tse-Kiang, three thousand miles long, is navigable to ocean-going vessels for eleven hundred miles. The Hoang-Ho,

*Natural wealth.*

two thousand six hundred miles long, is connected with the Yang-tse-Kiang by the Imperial Canal, and these two rivers and the canal form one of the finest water systems in existence. The climate of China is very similar to that of the United States. Minerals exist in abundance. It is believed that the bituminous and anthracite coal fields of China contain as much coal as those of all the other countries of the world combined.

In Chinese manufacturing, machinery has not generally replaced human energy; consequently only those things which will sell at a high price, — such as silks and fabrics of various kinds, — are generally made. In spite of the fact that the people are apparently so capable and so numerous and the natural resources so abundant, the industries of China are practically undeveloped. Despite its native abundance, iron is imported, although proper methods could produce iron in China as cheaply or more cheaply than in any other place in the world. Coal is mined in very limited quantities and by the use of such inefficient appliances that only the rich can afford to buy it. The transportation facilities except on the waterways are so poor that a bulky commodity, like coal, cannot be shipped for any distance before its price has become prohibitive to all except the most wealthy.

*Industrial development.*

Here, then, is a picture of a land full of capable people, abounding in natural resources, but without industry, and therefore in constant danger of want. Crop failure in a district remote from water transportation means starvation. There are few railroads; the roads are bad. People starve within a few hundred miles of an abundant supply of food, because there are no means of transporting bulky commodities.

*Transportation facilities.*

It may seem inconclusive to say that the backward condition of China is due to a lack of organized industry, since the absence of industry is due, in large measure, to a blind worship of custom. "My father used this tool" is a conclusive argument in the ears of the son, and he uses the same tool without question. The people of the United States, however, have always developed industry irrespective of tradition, because they know that only through the breaking of tradition can progress be made.

*Tradition.*

China exists in a state of deficit and the United States in a state of surplus, although in both countries there are capable populations and great natural resources. What is the cause of this difference between two nations so similarly situated? Briefly stated, it is this: the people of the United States have learned to control their environment, and the Chinese have not. Instead of letting nature dominate them, the people of the United States have learned in a large measure to dominate nature. If the Mississippi overflows its banks, as it sometimes does, the people are not drowned by the tens of thousands, because, long before the break occurs or the water reaches a town, the news of the coming flood has been sent over telegraph wires and the people are prepared to meet it or else have left for places of safety. As a rule, however, the Mississippi is not allowed to overflow its banks, although it is in exactly the same position as the Hoang-Ho, flowing in a channel which is above the level of the surrounding country.

*Control over environment.*

The control of Americans over their environment may be seen in another direction. The Chinese depend upon one crop, — rice. If the rice crop fails, the Chinese starve. The people of the United States, however, do not depend

on one crop. A great part of their food is derived from wheat; but through the development of the milling industry, the beef industry, the canning and preserving industry, and a score of others, it has been possible to live successfully through a time of shortage in one crop without being in immediate danger from starvation.

The United States, unlike China, has developed a social surplus. All of the products of industry are not consumed at once, — part of them is stored up to assist in future production. The development of the social surplus is one of the great steps in civilization. *Social surplus.*

When the savage of Australasia found a whale, which had drifted ashore in a storm, he at once summoned his friends and neighbors and had a banquet. Sometimes they ate for a week, and sometimes longer, and sometimes they died from overeating; but they ate until all of the whale was gone and then eked out an existence on berries and such food as they could find until the gods should send them another whale. Americans, however, have a different method of treating food. When a large amount of food, or its equivalent in money, is secured by a man, he does not eat or drink it up at once, but puts by a portion of this wealth for a "rainy day." Thus he creates a social surplus.

As many people have been saving in this way, great masses of surplus wealth have been stored up in the form of railroads, factories, machine shops, houses, and public buildings; and these things accruing year after year serve to increase the productive efficiency of the people and to render them more capable of supplying themselves with the goods that they desire. Not only does this surplus, stored up and added to year after year, guarantee the nation against

starvation and absolute want, but in addition it supplies men with the comforts and pleasures of life.

The important results of this social surplus may be seen in the problem of food. While the Chinese live upon rice, people in the United States are able to secure all kinds of nourishing food. They have meat, which is a luxury in China; they have sugar in large quantities, and an abundance of fruit and vegetables in summer and winter. Food is provided in variety as well as in abundance. Mechanical inventions, one form of social surplus, have increased and varied the consumption of food in the United States.

The presence of a social surplus means national prosperity. However, since the real end of national prosperity is individual prosperity, national wealth is of little real value unless it is distributed among the individuals composing the nation. The United States is immensely wealthy; great quantities of additional wealth are produced each year; increasing capital is enlarging the possibilities of wealth production. It is not enough to state that the country is rich. What becomes of these riches? Dickens draws a sharp contrast between national and individual prosperity. In "Hard Times," Mr. McChoakumchild, the schoolmaster, who is teaching political economy, says: "Now this schoolroom is a nation and in this nation are fifty millions in money. Girl number twenty, is not this a prosperous nation, and ain't you in a thriving state?" And girl number twenty, the daughter of a circus rider, replies that she cannot say whether or not it is a prosperous nation and whether or not she is in a prosperous state until she knows who has the money and whether any of it is hers.

**Individual prosperity.**

The United States cannot be truly prosperous and we as

individuals cannot be well off unless all of us share in the national prosperity. The real test of prosperity must be, not national wealth, but individual welfare; and to attain this welfare we must constantly be guided by the ideals of efficiency and conservation.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. What is the dictionary definition of an ideal?
2. What is your definition of an ideal?
3. What are economic ideals?
4. How many economic ideals can you name?
5. Of what value are economic ideals to the individual?
6. To the social group?
7. What are your reasons for wishing to be efficient?
8. Do you believe in conservation?
9. If conservation benefits the future only, how can it be justified?
10. Why are national prosperity and individual prosperity not synonymous?
11. Which of the three economic ideals is most necessary in the United States to-day? Why?

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# PART II

## CONSUMPTION OF WEALTH

## CHAPTER III

### Problems of Consumption

I. The economic life
   1. Its ideal
   2. How to measure this ideal:
      *a.* Through the consumption of wealth:
         (1) The meaning of consumption
         (2) Consumption necessary to adult life
      *b.* Through the production of wealth:
         (1) Why production is vital
         (2) The economic life two-sided

II. Wants and their satisfaction
   1. Standard of living:
      *a.* What it means
      *b.* How it depends upon:
         (1) The wants of individuals
         (2) The cost of commodities
   2. Wants:
      *a.* Meaning
      *b.* Kinds
   3. Utility:
      *a.* Meaning
      *b.* Kinds:
         (1) Natural utilities
         (2) Place utilities
         (3) Time utilities
         (4) Form utilities
      *c.* Law of utility

III. Principles governing consumption
  1. Importance of consumption
  2. Principles of consumption:
    *a.* Consumption should be regular
    *b.* Consumption should be varied:
      (1) Disadvantages of sameness
      (2) Advantages of variety
    *c.* Result of stability and variety

**The Economic Life.** — Life has a distinctly economic background. Food, clothing, shelter, and recreation, upon which life so intimately depends, are the products of economic endeavor. All life is not economic; there is more than the economic in life; and yet all life is dependent upon the economic for its continuance.

When therefore we speak of the economic life we mean that life which has welfare as its goal. Welfare may be social or individual, and it is possible that the two may not always harmonize. Socially speaking, welfare is increased by the adoption of universal education; but it may happen that the educational system is unsuited to one individual in the social group. The idea of social welfare must not exclude individual welfare. **Its ideal.**

There are, perhaps, two measures of this welfare. The first, a measure in terms of the consumption of wealth, conceives of welfare as resulting from the satisfaction of economic wants. The second, a measure in terms of the production of wealth, conceives of welfare as resulting from surplus wealth. **How measured:** ***Through consumption.***

The consumption of wealth is the using of economic goods to satisfy human wants. Each child is a consumer. For a period ranging from ten to twenty-five years, the children born into American homes are not producing economic goods

at all. During this entire period of youth they are maintained through the surplus created by the other workers of the community. Every adult while preparing to produce has passed through this era of consumption. When this consumption stage is prolonged, when the child's preparation for life is very complete, when efficiency has been assured by a sufficient supply of economic goods during the immature period, individual welfare is conserved and social welfare promoted because the long period of consuming without producing will probably result in more efficient adult production.

If youth has been wisely spent, the years of adult life should show a large surplus of production over consumption. This surplus, which the individual owes to the community for his early years of maintenance, is used to support the children who, in the next generation, devote many years to consumption and training and thus guarantee their own efficiency in manhood. The economic life may be lived by the adult, however, only so long as an adequate supply of consumption goods is provided. Consumption provides the basis for youth and development, but it is no less essential to efficiency in adult life.

Goods cannot, however, be consumed until they are produced. Men cannot eat without working. Children cannot be kept in school until they are eighteen, consuming constantly but never producing, unless some of the adult producers are creating more wealth than they themselves are consuming. The economic life on its productive side, therefore, presupposes that the producing members of the community are producing enough, in addition to the amount that they actually consume, to enable the immature members of the community and those

*Through production.*

beyond the period of active work to maintain themselves. Differently expressed, each producer must create a surplus over the amount which he consumes.

The economic life is much more than consumption. It is consumption plus production. While human wants are satisfied directly through consumption, it is through production that consumption is made possible. There is in this concept of the economic life no place for idlers. Every normal adult man or woman must be a producer as well as a consumer, because the individual who accepts a return where no service has been rendered inevitably loses his self-respect. Each member of an economic society will render the community such service as he can render, receiving in return from birth to death at least enough consumption goods to maintain life and efficiency. In this way the ideal of the economic life will be approached.

**Wants and Their Satisfaction.** — The consumption of wealth is a far better measure of welfare than the production of wealth because the amount of consumption can be so effectively determined in the individual case. This measurement of the consumption of a particular individual is called his "standard of living." The amount of goods which an individual consumes depends upon his income, the character of his wants, and the cost of satisfying them.

**Standard of living:** *Its meaning.*

Wants vary with the individual; so that the supply of economic goods which would suffice in the case of one individual or family would not suffice in the case of another. If a man is fond of good pictures, his wants are extremely expensive; if he likes books, they are only less so; while, if he is satisfied with magazines and newspapers, they are cheaply supplied.

*What a standard depends on.*

Likewise, food varies from individual to individual and from family to family; as does also the demand for clothing and housing. A standard of living, therefore, depends upon the number and character of wants, which become more and more complex as civilization advances.

The cost of living also plays an important part in determining the amount of goods which a man consumes. A man with a $2000 income, who pays fifty cents a pound for butter, is not so well off as a man with a $1500 income who buys the same butter for twenty-five cents a pound. The purchasing power of income is a very important factor in determining the standard of living.

Wants necessarily play a large part in the shaping of the economic life. A want is a desire for a " good " ; a good is an object or commodity which can be used in consumption. A want may be either elementary or acquired. Elementary wants are natural, including the wants for food, shelter, and clothing. In a greater or less degree, man shares these wants in common with animals. Acquired wants are part of our social heritage; that is, they have come down to us as a result of the process of civilization. Among them are included the wants for bathtubs, furniture, paved streets, and the like. The natural wants are desires for the necessaries of life; the acquired wants are desires for its comforts and luxuries.

**Wants:** *Meaning and kinds.*

All economic wants, whether elementary or acquired, are satisfied by goods. Each good has the capacity to satisfy a particular want. Food satisfies hunger; drink quenches thirst; coal provides warmth; shelter furnishes protection. These qualities in economic goods which satisfy human wants we call utilities. Utility must not be confounded with usefulness; for it is perfectly pos-

**Utilities:** *Meaning.*

sible for a commodity to possess utility without being useful. A diamond pin may not be useful, but it may satisfy one's desire for show. In economics, the word ***utility*** signifies the presence of some want-satisfying quality.

Utilities are of four kinds: (1) natural; (2) place; (3) time; and (4) form.

Natural utilities exist in the good because of its inherent nature. Coal, for example, though embedded in the vein, possesses utility. To be sure this utility cannot be made available without an intermediary process called mining; but the coal, like many other natural goods, possesses in itself the power to satisfy wants.

A place utility is created when economic goods are taken from a place where they are not needed to a place where they are needed. Transportation creates place utilities in economic goods. Cotton in certain parts of the South and corn in certain parts of the West are of such low utility that they are sometimes burned for fuel, but the transportation of either commodity to Massachusetts greatly enhances its want-satisfying qualities. The utilities in the goods have been increased by transportation because cotton or corn will satisfy more wants in Boston than in Texas or Kansas. Transportation has therefore created place utility in these goods.

Time utilities are created by holding economic goods from the time they are not wanted till the time they are wanted. Ice in January is seldom wanted and therefore possesses little utility, but the same ice stored until July is frequently wanted and therefore possesses great utility. This increase in utility due to the lapse of time is called time utility.

Form utility, created by a change in the appearance or

inherent qualities of a good, is the most usual of the four. A chair in the furniture factory possesses a greater want-satisfying capacity than the boards in a lumber yard. The clay in the clay pit will not satisfy nearly so many wants as the clay pressed into a brick and baked, ready for building operations. Form utilities are the creations of manufacturing processes; hence, each increase in manufacturing augments the total of form utilities.

After utilities have been created or augmented in a good, this good does not possess the same want-satisfying quality under all conditions. Its utility will vary with the individual and with the amount and kind of good. Goods which provide the necessities of life possess more general utility than goods which provide only the luxuries. A coat possesses more utility for a cold man than for a warm one. This variation in utility gives rise to the formulation of the law of utility, — increasing amounts of a good mean a decreasing utility in each amount consumed.

Suppose you have been taking a long tramp and are strolling along a hot country road. You are tired and thirsty and long for some luscious fruit to refresh you. The thought of an apple comes into your mind and you feel an intense want. If you could get just one apple, it would possess very great utility for you. As you trudge along you find, quite unexpectedly, that your longing is about to be satisfied.

*Law of utility.* A farmer hails you, and being loaded down with apples, offers you one. You thank him and eat the apple with extreme satisfaction. He offers you another, and still another; and by this time your want has been almost satisfied. You have enjoyed each apple, but in a less and less degree, because every additional apple affords less satisfaction than the preceding one. Finally, after

you have eaten five or six apples, you have no desire for any more, — so far as you are concerned they cease to possess utility. In fact, if you were to persist in consuming apples, pain and distress would ultimately result; that is, to you, apples which a few moments before possessed utility would now possess disutility.

On this experience, therefore, the economist bases his law that, if an economic good is supplied in endless quantity, the point will ultimately be reached where it ceases to possess utility and, if consumed beyond that point, it will possess disutility.

**Principles governing Consumption.** — Wants are satisfied through the consumption of economic goods. The importance of consumption, therefore, will depend upon the number, character, and variety of wants. In primitive times, when wants were few and simple, the consumption of the uncivilized man was limited to his elementary wants for food, shelter, and clothing. With the progress of civilization, wants are constantly increasing, and the problems of consumption, therefore, become correspondingly complex. The increase in number and variety of wants, which has accompanied advancing civilization, results in greater and more varied consumption provided a system has been established which simultaneously increases production. The principles of consumption must therefore play an important part in any discussion of economics.

**Importance of consumption.**

Society is slowly learning that to receive the highest benefit from the consumption of wealth, the individual must consume regularly. Primitive man, depending on hunting and fishing for his livelihood, starved one day and gorged the next. Modern man, depending on a well-

organized system of industry, is fed and clothed from day to day and does not spend one day in misery and the next in happiness. In this way, by maintaining a constant rather than an intermittent supply of consumption goods, men are made more efficient producers.

**Its principles:** *Consumption should be regular.*

The first step in progress was to make certain a steady supply of consumption goods: the next step was to render that supply more varied. This idea of variety in consumption may be best seen by calling to mind again one point of difference between China and America. The Chinese have practically no variety in their consumption of food. Rice is their staple; and their dependence upon this single article of food has two distinct disadvantages. In the first place, workers get no particular pleasure out of this monotonous diet; and, in the second place, the nation starves if the rice crop fails.

*Consumption should be varied.*

America, on the other hand, is not dependent on one staple. The exclusive diet of rice or wheat has been replaced by a varied diet of fresh meat, eggs, butter, sugar, canned vegetables and fruits, bread and bread products, and fresh, salt, and canned fish. This variety in consumption has a double advantage. It means, first of all, that if one crop or one source of food supply fails, the nation will not starve. It means, further, that this varied diet contains food elements which will give the individual more pleasure in his consumption and will therefore increase his welfare. Thus, the American workman, whose food consumption includes meat, vegetables, fish, sugar, bread, butter, and the like, lives a more enjoyable life and is a far more efficient producer than the Chinese laborer whose diet consists solely of rice.

With stability and variety in consumption comes the basis for economic welfare, provided this stability and variety exist throughout the various classes in the community. Hence, in order to determine the extent of welfare in the United States, it becomes important to inquire what standards of consumption the members of American society are able to maintain.

*Result of stability and variety.*

## TOPICS FOR CLASS DISCUSSION

1. What are the chief obstacles which prevent the American people from living " the economic life " ?

2. If you could, would you do nothing always? Why?

3. Do people actually expend their incomes so as to get the maximum utility, judged by a standard they would admit to be morally sound?

4. Could a nation better do without money, roads, or food?

5. What is the chief advantage secured by varying consumption?

6. How varied is your own diet? (Test by keeping a schedule for a week or more.)

7. What advantages have followed the introduction of sugar as a cheap article of food?

8. Show the benefits that will result from an extensive use of tropical fruit and vegetables.

9. How will the consumption of breakfast foods affect the people of America?

10. What is the relation between varied consumption and production?

11. What advantage has a community in which consumption is varied over a community in which it is unvaried?

12. Are our wants wholly under the control of our reason? Do we always desire those things which are beneficial? Can you give cases where wants seem to flow from the action of habit?

13. Are you able to satisfy all your wants? Does law or social custom prevent you in some cases? Would you have sufficient purchasing power to do so in any case?

14. Suppose you had $100 to spend. Would you spend all of it at

once? What would you buy? Would you buy the same things at all times and under all circumstances?

15. If you had $200 to spend, would you include among your purchases all the things you would have bought for $100?

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## CHAPTER IV

### The Problem of the Standard of Living

I. Difficulty of the problem
   1. Cost of living in city and country varies:
      *a.* In regard to rent
      *b.* In regard to food
      *c.* In regard to clothing
      *d.* In regard to fuel
      *e.* In regard to incidentals
   2. Cost of living in different cities varies

II. The elements in a standard of living
   1. What the elements are
   2. Their relative importance as shown by a New York study:
      *a.* Amount spent for rent
      *b.* Amount spent for food
      *c.* Amount spent for clothing
      *d.* Amount spent for fuel and transportation
      *e.* Amount spent for other purposes
   3. The conclusion

**The Problem Difficult.** — Individual prosperity and industrial efficiency are dependent on the maintenance of a normal standard of living. It is an easy matter to say that a proper standard of living is determined by the amount of economic goods necessary to maintain the highest industrial efficiency, but a discussion of the price and character of these goods as well as of the specific goods necessary to maintain efficiency makes the problem an involved one.

Wages is not an accurate measure of the standard of

living, since the value of wages depends upon the amount of economic goods which wages will buy. When prices are high, a given wage will buy less than when prices are low. A standard of living varies therefore with the cost of living. But the cost of living itself is difficult to determine accurately because of differences between city and country conditions.

**Cost of living varies:**

First of all, there is the question of rent. In the tenements of New York City a man pays six dollars a month for a single room. In many country towns this six dollars a month would secure a fairly comfortable four- or five-room wooden house. The six dollars which would provide bare necessities in the city would secure comforts in the country.

*In regard to rent.*

The price of food, the most important item in maintaining a proper standard of living, varies in city and country with the character of the commodity. The price of meat is about the same in both places. On the other hand, vegetables are considerably lower in the country, the price paid for them being the equivalent of the city price with the cost of freight, the charge of the commission merchant, and the profits of the retailer deducted. However, the prices of canned goods, bread, cakes, and crackers differ little in city and country districts. Things which are produced in the country are much lower in price there than in the city; while things which are produced in factories are about the same price in city and country.

*In regard to food.*

The cost of clothing would vary little in city and country districts were it not for the presence in the city of rich people who dress extravagantly. The standard of dress which they set becomes the conventional or fashionable standard, and it must be followed by all who

*In regard to clothing.*

would be "in style." The result is an expenditure for trumpery and cheap finery which is unknown in the country.

Another important city item is the expenditure for fuel; but in the country fuel is almost a negligible quantity because wood, which is very generally burned, can be easily and cheaply secured. Hence the fuel supply is much more cheaply secured in the country districts and small towns than it is in larger towns and cities. *In regard to fuel.*

Finally, the country districts do not furnish so many opportunities for spending money as do the city districts. There is little carfare to pay and the temptation to buy in stores is greatly lessened by the absence of display advertising in store windows. Therefore less will be spent in the country for incidentals. *In regard to incidentals.*

Again, the cost of living varies in cities themselves. Individual items of expense are much greater in some cities than in others. For example, rents are much higher in New York than in Philadelphia. While one item may offset another, these differences must be taken into account when estimating the cost of living in different cities. The estimation of a standard of living is a problem of serious magnitude. **In different cities.**

**The Elements in a Standard of Living.** — A standard of living to accomplish its purpose of securing and maintaining efficiency should provide for: (1) the necessaries of life, including housing, food, clothing, fuel and light, and transportation; (2) recreation, including proper provision for health and hygiene, amusements, and books; (3) voluntary subscriptions for insurance, clubs, trade unions, and regular savings; (4) unusual expenditures for medicines, physicians, and the like, as well as expenditures required for household furniture. **What the elements are.**

Almost all the expenditures of a workingman's family are made for the necessaries of life, of which housing and food are by far the most important in a modern city. In Chapin's New York study, which contains the standard American material on the subject, the expenditures for housing are classified by incomes and nationalities. Those families receiving an annual income of less than $700 were found to spend one fourth of it for rent; the families having an income between $700 and $1000 spent one fifth for rent; while those families receiving more than $1000 paid one sixth of the total income for rent. After a careful analysis of the number of rooms which each family used, the New York investigators decided that an "efficiency" standard of housing was not generally secured by the families receiving less than $1000 annual income.

*Amount spent for rent.*

The largest single factor in the family budget is food and, unlike rent, the expenditure for food is almost constant. In the New York families, from forty to forty-five per cent of the income is expended for this one item. In the families with incomes of less than $1000, from $200 to $350 is spent for food; that is, from four to seven dollars per week. The analysis of the food expenditures was very thorough. The family budgets were examined by a food specialist, the values of the various foods consumed were ascertained, and, in the case of each family, a decision was reached as to whether the family was or was not underfed. In the families included in the New York study underfeeding practically ceased when an income of $900 a year was reached.

*For food.*

Clothing was found to constitute a surprisingly small item in the budget of a workingman's family. The families with incomes under $800 spent less than $100 for clothing,

while those with an income of more than $800 spent from $100 to $150 for the same purpose. After a careful study of the problem, the New York investigators concluded that a normal family living on Manhattan Island could clothe itself for $105 per year. This allowed $33 for the man, $23 for the woman, $12 for each boy, $15 for each girl, and $10 for laundry. That this expenditure is not excessive is shown by the following list of articles designed to clothe a boy for a year: Two hats, $.50; one overcoat, $2.50; one suit, $2.50; one pair of trousers, $.50; two shirts, $.50; summer underwear, $.50; winter underwear, $1.00; six pairs of stockings, $.50; two pairs of shoes, $2.00; repair of shoes, $1.25; mittens, $.25; total, $12.00.

*For clothing.*

The expenditures for fuel and light are comparatively small, varying from three and one half to six per cent of the total family incomes; *i.e.*, $25 to $65 annually. The remaining item is transportation. In a city like New York, this is an important factor. In most of the families reporting any transportation expenditure, it was found that this item fell between $20 and $40 per year.

*For fuel and transportation.*

Expenditures for recreation vary considerably. In the lower income groups they are very small, but they rise rapidly with the increase of income. The same thing is true with the voluntary disbursements and the extraordinary expenditures. For furniture, for example, the average amount expended by the families with incomes between $600 and $700 was $6.22 per year; while even among the families with incomes between $1000 and $1100, the average expenditure for this purpose was only $12.89.

*For other purposes.*

**Conclusion.** Whatever may be the ultimate conclusion regarding the exact amount of income necessary to maintain efficiency in any locality, the necessity of providing an efficiency standard of living exists. Families — men, women, and children — require a certain minimum of the necessaries of life. Such a minimum, whatever it may cost, should, in the interest of welfare and efficiency, be assured every member of the community.

## TOPICS FOR CLASS DISCUSSION

1. In your opinion, what is the most fundamental reason for maintaining a proper standard of living in a community?
2. What is the effect of maintaining a high standard of living?
3. Do economic wants increase more quickly than the standard of living?
4. What would be the effect upon standards if the poorest third of our city populations could be moved on to farms?
5. What would be the effect on the United States of providing a uniform minimum standard of living for all?
6. What is the ultimate effect on the individual of living below the normal standard?
7. Why should the community at large be interested in maintaining a high standard of living?
8. What is the force most to be relied on to maintain a proper standard of living?

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## CHAPTER V

### Wages and Standards

I. The wage required to maintain efficiency
   1. What the wage should be:
      *a.* In New York
      *b.* In Buffalo
      *c.* In Homestead
      *d.* The conclusion
   2. What the wage really is:
      *a.* Conclusions drawn from the table
      *b.* A final summary
      *c.* The result

II. Difficulties in measuring wages
   1. Prices affect wages
   2. Real wages different from money wages
   3. Average wages used as a basis:
      *a.* An example
      *b.* Why they are misleading
      *c.* How the " weighted " average is secured
   4. Wages and prices:
      *a.* Recent fluctuations in both (1890)
      *b.* The rise in prices:
         (1) Those who suffer most
         (2) Causes of the rise in prices

**The Wage required to maintain Efficiency.** — Several careful studies have been made recently in an attempt to determine exactly what amount will maintain the efficiency of a " normal " family consisting of a man, a woman, and three children under fourteen years of age. These studies are remarkably uniform in their conclusions for the various cities under consideration.

**What the wage should be:**

The most satisfactory American study in the standard of living was made in 1907 and 1908 in the city of New York. An analysis of the family budgets of 391 workingmen's families, together with an exhaustive study of food values, housing, clothing, and the like, led the investigators to conclude that: "An income of nine hundred dollars probably permits the maintenance of a normal standard, at least so far as the physical man is concerned. . . . Whether an income between eight hundred dollars and nine hundred dollars can be made to suffice is a question to which our data do not warrant a dogmatic answer." In the same report appears an analysis of one hundred workingmen's families in Buffalo, with the conclusion that before they are applied to Buffalo, the New York figures should be reduced by one hundred and fifty dollars. In Homestead, a suburb of Pittsburgh, a recently completed study covers ninety-nine families, from whose budgets the investigation concludes: "It is not until we cross the twenty-dollar [a week] mark that we feel that the family is well provided for and needs, if provident, have no fears for the future."

*In New York, Buffalo, and Homestead.*

The available authorities are therefore in practical agreement that an "efficiency" standard of living can be maintained in the cities of the Middle States on an annual income ranging from $750 to $900, varying with the family, the nationality, and the city. Accepting these conclusions, we must next inquire how the wages actually paid compare with this "efficiency" standard; because the relation of workingmen to "efficiency" standards is, in the last analysis, measured through the wages they receive.

*The conclusion.*

How many men in the United States earn from $750

to $900 annually? In other words, how many workmen receive sufficient wages to enable them to rear three children, — to give them enough nourishing food, warm clothes, a decent house, an education up to their fourteenth year, and a legitimate amount of recreation? An answer to this problem is best sought in the following statistical table which, for brevity, covers only five income groups, for each one of which the cumulative percentages are set down: —

**What the wage really is:**

CUMULATIVE PERCENTAGES OF MALES RECEIVING CERTAIN CLASSIFIED WEEKLY EARNINGS, COMPILED FROM LABOR REPORTS, 1908–1910

| CLASSIFIED WEEKLY EARNINGS | *Massachusetts* 1908 (21 YEARS AND OVER) | *New Jersey* 1909 (16 YEARS AND OVER) | *Kansas* 1909 (16 YEARS AND OVER) | *Wisconsin* 1906–7 (ALL MALES) | *Bethlehem Steel Works* 1910 (ALL MALES) | *Railroads of the U.S.* 1909 (ALL MALES) |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | % |
| Under $8 . . . | 12 | 18 | 8 | 12 | 8 | 22 |
| Under $12 . . | 52 | 57 | 46 | 59 | 60 | 51 |
| Under $15 . . | 72 | 74 | 70 | 89 | 75 | 78 |
| Under $20 . . | 92 | 91 | 91 | 98 | 92 | 92 |
| $20 and over . | 8 | 9 | 9 | 2 | 8 | 8 |
| Total employed | 350,118 | 204,782 | 50,720 | 128,334 | 9184 | 1,502,823 |

A study of the above table shows that half of the adult males working in the industrial sections of the United States receive less than $600 per year; that three quarters are paid less than $750 annually, and that less than one tenth earn $1000 per year. These figures are not accurate, however, since they are all gross figures, including unemployment.

They should be reduced by, perhaps, twenty per cent, since that reduction would make all due allowance for unemployment varying with the year, the location, and the industry. Making, therefore, a reduction of one fifth in these gross earnings, it appears that half of the adult males in representative sections of the United States are earning less than $500 a year; that three quarters of them are earning less than $600 annually; that nine tenths are receiving less than $800 a year, while less than one-tenth receive more than that figure.

*What the table shows.*

Briefly summarized, the available wage data lead to the conclusion that the annual earnings (unemployment of twenty per cent deducted) of adult males, employed in sections east of the Rockies and north of the Mason and Dixon Line, are distributed over the wage scale as follows: —

*A final summary.*

| Annual Earnings | Adult Males |
|---|---|
| Under $325 | $\frac{1}{10}$ |
| Under 500 | $\frac{1}{2}$ |
| Under 600 | $\frac{3}{4}$ |
| Under 800 | $\frac{9}{10}$ |

If we accept as accurate the standard of living studies which set the "efficiency" minimum wage for a man, wife, and three children under fourteen years of age at $750 to $900 per year, it appears that a very large group of American wage earners is unable to support itself on this basis of efficiency.

*The result.*

**Difficulties in Measuring Wages.** — Since wages, as measured in terms of money, is not an end in itself, but merely a means to welfare, it matters little how much money wages a man actually receives. The really important point is not

how much money he gets, but how many goods he can buy. Thus, the purchasing power of wages is the real determinant of a standard of living.

Unless accompanied by a statement of prices, money wages is not even an approximate test of a standard of living. This is a bit of knowledge which many an immigrant learns each year from bitter contrast between prices in Europe and prices in the United States. He hears, to his delight, that if he leaves his fifty-cents-a-day job in central Europe and goes to Chicago, he can easily earn $1.50 for ten hours of work. The difference in wages appeals strongly to him, so he hastens to the New World. But once there he finds to his dismay that, while wages are three times as high as they were at home, prices are also three or perhaps four times as high as they were in Europe; so that, instead of being better off on $1.50 a day, he may actually get less for his $1.50 than he did for the fifty cents a day in Europe.

**How prices affect wages.**

There is thus a real difference between money wages and real wages. Money wages are wages actually paid in dollars and cents; while real wages represent the purchasing power of money. The discussion of the cost of living therefore centers about real wages. How many economic goods can a man really get in exchange for his wage? The answer to this question reveals his standard of living.

**Real wages and money wages.**

In most of the discussions on wages and the cost of living the wages considered are average wages, just as the prices considered are average prices. But average wages are not really true tests of wage conditions. Let us see, therefore, just what average wages represent. An average is a mean between two or more diverse numbers or instances. This

thought may be more clearly brought out by an illustration. Two groups of men are working, — ten carpenters at $3.00 per day and twenty laborers at $1.50 per day. If the carpenter helped the laborer to pay his landlord and grocer, an average would be a fair statement of wages. Nothing of the kind occurs, however, since the laborer with his $1.50 must meet all bills, while the carpenter to meet like bills has $3.00 per day. Thinking of an "average" wage of $2.25 one naturally says, "Yes, they are fairly well off." But "they" meaning nobody, the statement is absurd unless we know that, in reality, the carpenters are comparatively well off; the laborers, comparatively badly off.

**Average wages: *An example.***

The average in this case merely misleads, since neither the carpenter nor the laborer is receiving $2.25 per day. The average wage is an abstract concept, mathematically correct, but socially misleading. It represents neither purchasing power nor the wage actually paid, but a wage falling somewhere between the various groups of actual wages.

***Why they are misleading.***

In many calculations, average wages alone are employable, as in the comparison of wages and the cost of living; but it is possible to employ a "weighted" average and thus overcome at least a part of the error in the mathematical average. To secure a weighted average, instead of adding $3.00 and $1.50, and dividing the sum by two, the statistician takes into account the number of men receiving each wage, thus: —

***The "weighted" average.***

| | | |
|---|---|---|
| 10 carpenters | at $3 | = $30 per day |
| 20 laborers | at $1.50 | = $30 per day |
| 30 workers | receive | $60 per day |

or each worker receives a daily "weighted" average of $2.00. The mathematical average is, in this case, twenty-five cents per day higher than the "weighted" average. In cases where average wages must be used, the weighted average is by far the more accurate form.

Prices are paid by all, and the average price of a given commodity is fairly representative of actual conditions. By examining wholesale price-lists, it is possible to determine, with a fair degree of accuracy, what amounts people are forced to pay for the commodities they buy. **Wages and prices:**

In order to make the contrast between wages and prices as effective as possible, several bureaus of labor publish bulletins contrasting the wages of labor and the cost of food. A study of these bulletins shows that since 1890 there has been a very great change in wages and prices. Both fell heavily during the financial depression of 1893–1894, and then both rose regularly until 1907, when there was another sharp decline which has since been followed by a slight rise in both prices and wages. *Recent fluctuations.*

It is impossible to determine accurately whether prices have risen more than wages or wages more than prices during the last twenty years. A recent New Jersey report would lead to the conclusion that prices have risen more rapidly than wages. One fact is, however, apparent, — wages have risen for some of the laborers; prices have risen for all. An examination of the United States Bureau of Labor Bulletins shows that in some industries wages have actually fallen; nevertheless these laborers, on their lower wages, must pay higher prices. *The rise in prices.*

The situation is particularly severe among clerks, salespeople, and other salaried employees earning from $1200

to $3500 per year. The studies of wages and the cost of living include the wages of wage earners only. Could like statements be made for the large class of salaried employees, it would probably be found that, while salaries have been practically stationary, the cost of the necessaries of life has increased at least fifty per cent.

Numerous attempts have been made to discover the causes which underlie the rise in prices. The tariff, the trusts, increasing wages, the increased gold supply, luxury, and city life have all been assigned as contributing factors. As to which cause or which combination of causes is primarily responsible for rising prices, there is no general agreement.

With this chapter we close the discussion of the problems connected with the consumption of wealth. We shall now turn our attention to the problems of wealth production; for, as we have previously indicated, individual welfare may also be measured in terms of production.

## TOPICS FOR CLASS DISCUSSION

1. Should any relation be maintained between wages and standards?
2. How should this be done?
3. After ascertaining the discrepancy between wages and standards in the leading cities, what further steps must be taken?
4. Do high wages mean a high standard of living?
5. Why is the actual amount of the money wage unimportant?
6. Why are "average wages" inconclusive?
7. Granted that an adjustment can be effected between wages and prices, why is this desirable?

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# PART III

## THE PRODUCTION OF WEALTH

### CHAPTER VI

### NATURAL RESOURCES OF THE UNITED STATES

I. The factors in production:
   1. Meaning of production
   2. Requisites of production

II. The part played by natural resources:
   1. In ancient times
   2. In modern civilizations
   3. In China and the United States

III. The " land " or natural resources of the United States
   1. Importance of " land ":
      *a.* Its meaning
      *b.* How it determines activities
      *c.* How it aids man
      *d.* How it favors the United States:
         (1) In extent and climate
         (2) Importance of climate
   2. The minerals of the United States:
      *a.* Their importance
      *b.* Coal:
         (1) Our supply
         (2) Our consumption
         (3) Kinds and uses
      *c.* Petroleum and gas:
         (1) Our supply
         (2) A problem of the future

*d.* Iron and copper
*e.* Other minerals
*f.* Necessity for conservation
3. The conclusion

**The Factors in Production.** — Production is the process of creating or increasing utilities in economic goods, that is, of creating want-satisfying qualities in the raw materials of nature which supply the basis of all economic goods.

**Meaning of production.**

Of course, according to the theory of the indestructibility of matter, man can neither create nor destroy a single unit of matter. However, it is perfectly possible for him to change the form of this matter so that it will serve some definite purpose. This process, taking place everywhere and at all times, results in what we have already described as the creation of form utilities in economic goods. Man's efforts in the field of production consist, therefore, of all those activities which lead to the creation of utilities of one kind or another.

Production, which furnishes the material basis of welfare, depends upon natural resources, labor, and capital.

**Requisites of production.**

Natural resources are gifts of nature, limited in extent; labor is industrial effort; capital is an economic good used to assist in production. Every modern productive operation requires these three factors. Land furnishes the raw material; labor, the effort; and capital, the tools which are to assist in increasing the want-satisfying power of economic goods. Thus, specifically, the tree standing on the hillside is a natural resource. A man approaches the tree and begins chopping it with an ax. The man is labor; the ax is capital. The felling of the tree, which has brought it one step toward its final form of chairs, let us say, is one act in an operation which

will enable the wood to satisfy human wants. Therefore the act is productive.

**The Part played by Natural Resources.** — Natural resources may not make a civilization, but without them civilization would be impossible. A study of the great civilizations of the past shows that without exception the basis of their success was an adequate supply of natural resources. Babylonian, Egyptian, Carthaginian, Roman, and Chinese civilizations were all established in fertile valleys or with a nucleus of fertile land. In an age when agricultural land was almost the only resource relied upon, civilizations were necessarily founded in fertile agricultural districts. This truth was clearly recognized by the preacher who publicly gave thanks to Heaven for making the great rivers flow beside the big cities. Although his economics was certainly defective, he was grasping at an important principle.

**In ancient times.**

Natural resources are more important to-day than they were in any historic period, because modern civilization is founded on mineral as well as on agricultural resources. What, then, are the present resources of the world? Where do we find the possibilities for the development of great modern civilizations? The retarded development of the African continent is the outcome of its vast desert, great heat, regular coast line, and few navigable rivers. South America has its Amazon basin, but the tropical location and dense vegetable growth make the region at present of little real agricultural value; while the southern portions of the continent are too restricted in extent to furnish the basis for an extensive civilization. In Europe, the fertile basin of the Danube alone provides a really adequate physical background for this

**In modern civilizations.**

purpose. Australia is in parts far too barren and the sections which are usable are not sufficient in size to permit the establishment of a world power. Three other districts provide a basis in natural resources for a great world civilization. The first is India, whose semitropical climate in part militates against its success as the home of a dominant civilization; the second is China; the third is the United States.

These last two centers afford perhaps the largest resource possibilities for civilization in the world. The Yang-tse-Kiang Valley of China, fertile and wide in extent, provides means of transportation and rich agricultural land, while the timber-covered mountains of the north are rich in mineral wealth. The United States, with its Mississippi Valley, its variety of climate, its mineral and vegetable wealth, its great rivers, and its broken coast line has already spelled opportunity to millions of home seekers, and it promises in the future even greater development.

**In China and United States.**

**Natural Resources of United States.** — In economic terms the word "land" means not only fields and meadows, but also rivers, lakes, bays, mines of coal and metals, and oil, fish, forests, and wild game. In short, "land" includes all the gifts of nature (other than air and sunlight) which exist in their present form without the expenditure of any human labor. Most of this wealth is converted by mining, chopping, and similar operations into raw materials upon which men work to secure their livelihood.

**Importance of "land": *Its meaning.***

The character of natural resources frequently determines the lines along which people will direct their energies. Could Columbus, when he first reached American shores, have seen

the vast continent with all its latent possibilities, he might easily have predicted many of the transformations which have since taken place. Along the barren New England coast with its sharp, forested hills, thin soil, rivers, creeks, and bays, he would have observed the possibility of developing lumbering, shipbuilding, fisheries, commerce, and manufactures. In Pennsylvania he would have seen that the pioneer would eventually employ coal, iron, and oil, and from them construct the new industry. Again, could he have traveled over the fertile valleys of the South with its congenial climate, he would readily have foretold that here was a basis for extended agricultural development.

*Nature determines activities.*

Natural resources assist in the development of civilization chiefly in four ways: (1) soil and climate furnish the basis for agricultural development; (2) mineral resources furnish the basis of industry; (3) forests provide wood and conserve rainfall; (4) water resources furnish transportation and power.

*Nature aids man.*

Nature has been free in her gifts to the United States, but perhaps nowhere more so than in the wide range of climatic and agricultural conditions which she has afforded. The fertility of the soil has already been pointed out. The land, stretching fifteen hundred miles north and south, makes possible a wide range of climate, further diversified by altitudes ranging from sea level to elevations of several thousand feet. The most southern part is parallel with the great Sahara, while the northern limits, exclusive of Alaska, are in the latitude of Germany. Most parts of this vast area, about the size of Europe, will support a variety of crops. Even where the amount of rainfall is inadequate, natural obstacles may often

*Nature favors United States.*

be overcome by irrigation. If varied climate is an aid to varied agriculture, there is no other section of the world in which a more effective combination of climatic and agricultural possibilities exists.

Climate is a basic resource which cannot be destroyed or materially altered by human wastefulness. Modern world powers have their homes in the temperate zone; and it is fair to assume that, so long as the present forms of civilization prevail, cold, invigorating winters with warm short summers will combine to produce the greatest vitality and the most enduring energy. Since it is upon vitality and energy that civilization largely depends, the climatic location of the United States is most favorable.

If, now, we look under the surface of the earth, we shall find that nature has endowed the United States with rich mineral deposits. This kind of resource has always been of value to mankind, but it is only with the advent of modern industry that it begins to assume its greatest importance. In primitive civilizations, stone, bronze, iron, tin, zinc, gold, silver, and other minerals were used for ornaments, for weapons, and for similar purposes. In advanced civilizations, however, minerals determine largely the direction of national progress and the extent of national prosperity.

**Minerals of United States:** *Their importance.*

For convenience of discussion, minerals may be divided into two groups: fuels and ores. Of the fuels, coal is by far the most important, As a factor in promoting prosperity, it is second to none of the minerals in its threefold function of providing heat, light, and power. One hundred years ago the nation had a supply of coal paralleled only by that of China. To-day, however, authorities say that at our present rate of increase in con-

*Coal.*

sumption the available supply of anthracite coal will be exhausted in about forty years and the available beds of high-class bituminous coal in about one hundred and twenty-five years.

The increased use of coal has been phenomenal. From 1816 to 1825 there were mined 331,356 tons; from 1856 to 1865 there were mined 173,795,000 tons; while from 1896 to 1905 the amount mined had increased to 2,832,599,000 tons. So far as present indications are concerned, this consumption will increase in the future, subject only to the increasing cost of production. It will thus be seen that in no other field is conservation of more vital importance.

Coal exists in three forms: anthracite, bituminous, and lignite. Anthracite coal contains the highest percentage of carbon and is the most valuable as fuel. The available fields of anthracite, located in Pennsylvania, are being rapidly exhausted. Bituminous coal, which contains less carbon and is less desirable for domestic consumption, can be used for almost all commercial purposes. Furthermore, it exists in nearly all parts of the country. The third form of coal, known as lignite, consists of vegetable matter which has undergone chemical change and is much less valuable commercially. Vast fields of this lignite have been found in the Northwest. If its use can be made commercially profitable, it may be the coal of the future.

The other mineral fuels, petroleum and natural gas, which have been discovered in connection with most of the coal fields, are being rapidly exhausted. Already abundant supplies in Pennsylvania have been depleted. Ohio, Indiana, Illinois, and West Virginia are failing to increase their supply; and the time may soon come, perhaps within a quarter of a century, when the

*Petroleum and gas.*

better forms of petroleum and natural gas will be commercially unusable because of their scarcity and high price. In the Southwest, many new forms of petroleum have been discovered which may, with the advance of chemistry, replace the better grades now in use.

This question of the rapid diminution of the fuel supply presents us with a serious problem. When men first lived in the temperate zone, they depended upon wood and peat for fuel. Gradually, coal and gas replaced the more primitive forms of fuel. With the exhaustion of these fuels, the temperate dwellers are face to face with the problem of keeping warm in winter. Without some form of artificial heat, life in the temperate zone is impossible. What, then, shall civilization do? Furthermore, since modern industry is dependent upon power, mechanically produced, the future must discover some substitute for the rapidly vanishing mineral fuels. Though the immediate future is by no means certain, water power may ultimately prove an adequate substitute.

Among the mineral ores, iron and copper are by far the most important, and the apparent supply of these minerals is far larger than the available supply of coal. Originally, bog ore was taken from the lowlands of New Jersey and Virginia and converted into iron and steel products. This bog ore industry was then displaced by the ore mines of Pennsylvania, which, in turn, have been supplanted by the ore fields of the Lake regions. In these latter fields, the ore lies on the surface and is frequently shoveled by means of steam power into cars in exactly the same way that a gravel bank is removed.

*Iron and copper.*

Gold, silver, tin, lead, zinc, cement, brick clay, and stone are also produced in considerable quantities throughout the

United States. While less important than iron, they nevertheless play a leading part in determining the progress of an industrial civilization. Especially is this true of cement, brick clay, and stone, all of which are particularly valuable in structural operations. *Other minerals.*

These mineral ores together with the mineral fuels constitute the most exhaustible form of natural resources. A forest which is burned away may be replanted and replaced, but each ton of coal or silver ore which is mined is irreplaceable. It has disappeared and, although some substitute for it may be found, the coal or the silver itself will never, at least in historic times, be replaced. Too much emphasis therefore cannot be laid upon the necessity for conserving minerals. *Necessity for conservation.* When coal is mined, all of the coal in the mine should be removed. The policy frequently followed of removing the easily mined coal and then permitting the mine to fall in, thus forever sealing up millions of tons of less desirable fuel, is disastrous. Mineral resources are at the basis of every modern industrial society, and the welfare of both industry and society demands conservation.

We have seen, from this brief review of our natural resources, that, so far as they are concerned, nature has amply endowed the United States with the basis of progress and prosperity. Her great extent of territory, her fertility of soil, her variety of climate, her great mineral wealth still capable of conservation, all lead us to this conclusion. **The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. What is meant by the "economic interpretation of history"?
2. What physical reasons account for the greatness of England? Of the United States?
3. Has rainfall any relation to the density of population?
4. What relation exists between the shape and location of land masses of the earth and man's development?
5. Explain the relation between climate and efficiency.
6. Do the natural resources influence the development of industries in a country? How have they affected the industries of the United States?
7. What are the chief natural resources of the United States? In respect of what resources is the United States preëminent?
8. Of what use is land to the lumberman? to the manufacturer? to the shopkeeper? to the traveling salesman? to the fisherman? to the aviator?
9. Why are iron and coal called the foundation stones of industry?
10. Why does the Steel Trust aim to secure possession of a large supply of iron ore and coal?

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## CHAPTER VII

### Land Reclamation

I. Reclamation by means of irrigation
   1. How accomplished
   2. First projects:
      *a.* Work of the Pueblos
      *b.* Work of the Mormons
      *c.* Operations in California
      *d.* Result of the Horace Greeley project
   3. Recent development:
      *a.* Extent and value of irrigated lands (1900)
      *b.* The act of 1902:
         (1) What it provides for
         (2) How expense is borne
         (3) Future possibilities of irrigation
         (4) The work recently done
   4. Advantages of irrigation.

II. Reclamation by means of drainage
   1. How carried on
   2. Our swamp lands:
      *a.* Their extent and character
      *b.* The proposed work
      *c.* The Florida Everglades
      *d.* The Dismal Swamp
      *e.* Other swamp lands
   3. The problem before us

Agricultural land is among the foremost assets which a nation can possess. Hence, any agencies which tend to render it less valuable should be effectively counteracted, while those measures which will insure its fertility should receive hearty public support. There are really three

forms of land reclamation: (1) the reclamation of abandoned farm land by restoring its fertility; (2) reclamation through irrigation; and (3) reclamation by drainage. Since, however, the problem of reclaiming abandoned land will be considered in connection with the subject of American agriculture, the present chapter will be devoted to a discussion of the problems of irrigation and drainage.

**Reclamation by Means of Irrigation.** — Any stream or body of water which is properly situated may be used for irrigating land. In some cases the water for irrigation is pumped from artesian wells. Wherever there is a shortage of rainfall, irrigation is possible, provided there is an adequate supply of water available.

**How accomplished.**

The first irrigation in America was undertaken by the Pueblo Indians and the Cliff Dwellers who lived in New Mexico and Arizona. While their methods were of the crudest, their work was of such a substantial character that farmers still use some of their irrigation ditches. Scientific irrigation replaced these cruder methods when the Mormons under their great organizer, Brigham Young, began their conquest of the Utah desert. Starting just before the middle of the nineteenth century, the irrigation work of the Mormons has spread until it covers tracts in Utah, Wyoming, Idaho, and Arizona.

**First projects:** *Work of Pueblos and Mormons.*

A further step in the development of irrigation was made during the gold rush to California. The miners built sluices to carry water for their mining. Sometimes, when these sluices passed through fertile land, they were tapped either by the miners or by the farmers. In this way, the ultimate value of irrigation was conclusively demonstrated and the foundation

*Operations in California.*

laid for the irrigation systems which have helped to make California one of the garden spots of the world.

The Horace Greeley Irrigation Colony, named after the man who was most interested in promoting it, was started in 1870 and furnished the nucleus of the irrigation boom of the eighties. During this boom hundreds of miles of canals were planned and built, the work involving millions of dollars.

*Result of Horace Greeley project.*

Since 1870 the growth of irrigation in the West has been rapid. In that year there were 20,000 acres irrigated; by 1880 the number of acres had increased to 1,500,000; in 1889, to 3,631,000; and in 1900, to 7,539,000. Of this irrigated land, eighty per cent was devoted to the raising of crops and twenty per cent to pasture land. While the total cost of providing the irrigation for this seven and a half million acres was $67,770,000, the value of the crops in 1900 was $86,860,000, or a return in one year of about thirty per cent more than the total cost of irrigation.

**Recent growth:** *Extent and value in 1900.*

The greatest real gains, however, have been made since the passage of the National Reclamation Act of 1902, which provides for the construction of irrigation works under the direction of the Secretary of the Interior. Such works are to conform to the state laws and to be developed in accordance with local conditions. In order to prevent the possibility of the concentration of the irrigated land in the hands of a few individuals, holdings under the Act are limited to 160 acres for any one person.

*Act of 1902.*

Under this Act of 1902 the expense of the construction and improvement of an irrigation system must be met from the sale of public land. In this way the work was started.

The settlers who take up irrigated lands are required to pay to the government, in ten equal yearly installments, the cost of irrigation; so that at the end of ten years the government has returned to it an amount of money equal to the amount spent the previous decade on the irrigation system. By this means, every ten years it is possible to double the amount of irrigation work undertaken. In order to insure a democratic method of administration, the irrigation plant is turned over to the community as soon as it has been paid for. Thus the responsibility for the successful management of the system rests on the local community rather than on the authorities at Washington.

In the aggregate, the seven and a half million acres of irrigated land sounds like a great amount; but when compared with the possibilities of developing systems of irrigation it is only a small beginning. There are approximately seventy million acres of arid or nearly arid land which may still be irrigated. The work already done therefore covers about one ninth of the irrigable land of the country.

Since the passage of the National Reclamation Act of 1902, the government has undertaken the construction of irrigation projects which will irrigate about five million acres of land, or an area equal to the present total acreage of crops in Connecticut, Massachusetts, New Hampshire, and Florida.

**Advantages of irrigation.**

An Eastern man who recently visited some of the Western irrigated land was asked on his return what he thought of the Eastern agriculture as compared with that of the West. "Oh," said he, "it is a poor substitute for irrigation." Continuous sunshine and a sufficient water supply, furnished when wanted and in exactly the right quantities, form a sharp contrast with the fickle climate of the East.

**Reclamation by Means of Drainage.** — The reclamation of land by drainage, which constitutes a main feature of the Act of 1902, is in no sense less important than the work of irrigation. Eight million acres of land which have been drained up to the present time have been reclaimed through private or State initiative. The national government has done practically nothing. **How carried on.**

In the United States there are over sixty million acres of swamp or overflowed lands. The notable thing about swamp land is that it is frequently of very high quality. Take, for example, the swamp lands along the Mississippi. They consist of rich, deep soil that has been deposited by the river during ages. This soil is formed of the finest silt, the scourings of many different kinds of rocks carried down from the head waters of the Mississippi and its tributaries. When, in contrast to this, one considers that in certain sections of the country farmers are attempting to raise crops on poor soil eight or ten inches in depth, it will readily be seen that the swamp land when drained will present opportunities far superior to those now offered by the average farm land. **Swamp lands:** *Extent and character.*

At the session of 1905–1906, Congress appropriated $15,000 for the purpose of surveying the swamp lands on the ceded Chippewa Indian reservations in Minnesota. The report on the survey shows that it is possible to drain 267,000 acres of land and to improve 135,000 additional acres. The total cost of this work is estimated at slightly over $1,000,000, while the cost per acre will vary from $1.62 to $3.23. Since this is a region in which drained lands are worth from $12 to $15 per acre, the government can readily afford to invest in the project. *The proposed work.*

Perhaps the two best known swamps are the Florida Everglades and the Dismal Swamp of Virginia. The Everglades is a swamp during the wet season only and even then there are stretches of prairie. These, however, are rendered inaccessible by the water runs. Some private attempts have been made to drain the Everglades, and these have been singularly successful. The soil, consisting of silt and decayed vegetable matter, ranges from three to fifteen feet in depth and is remarkably rich. The Everglades cover more than three million and a half acres, a large portion of which is drainable at a very reasonable expense.

*The Florida Everglades.*

The Dismal Swamp is covered by patches of water which are seldom more than two or three feet in depth. Like the Everglades, the Dismal Swamp presents no serious engineering difficulties. It is merely a big project which must be handled on a large scale.

*The Dismal Swamp.*

In Louisiana near New Orleans, in Minnesota, in North Dakota, in the Red River Valley in Oklahoma, and in parts of California, considerable draining has been privately undertaken and has met with great success. As in the case of irrigation, however, reclamation projects must be undertaken on a scale which is too vast for individual enterprise and which can be most justly and equitably administered by a government agency.

*Other swamp lands.*

There are over 70,000,000 acres of land available for cultivation and wonderfully rich in productive power if only water can be supplied to them in sufficient quantities. On the other hand, there are another 60,000,000 acres which will become wonderfully productive if they can be properly drained. The problem of supplying the water in one case and removing it in the other is intri-

**The problem before us.**

cate, demanding careful study, highly specialized mechanical appliances, and vast outlays of capital. Such outlays can best be made by the federal government.

## TOPICS FOR CLASS DISCUSSION

1. What does irrigation show us in regard to man's control over his environment?
2. Is the government interfering with a "divine plan" when it irrigates barren land?
3. In what sense is Eastern agriculture "a poor substitute for irrigation"?
4. Why was irrigation not taken up by the government earlier in the history of the country?
5. What are the advantages of irrigation?
6. Is it better to irrigate the land of the United States or to go over into Canada and take up the "free land"?
7. Why are swamps so rich?
8. Why are they not more extensively drained and used?
9. On what grounds can the national government justify its activities in the reclamation of land?

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## CHAPTER VIII

### Forest Resources

I. The forests of the United States
   1. Importance of forests
   2. Groups of forests:
      *a.* The Northeast Forest
      *b.* The Southern Forest
      *c.* The Lake State Forest
      *d.* The Rocky Mountain Forest
      *e.* The Pacific Coast Forest
   3. Consumption of wood

II. The destruction of forests
   1. The causes:
      *a.* Effect of early attitude
      *b.* Forest fires
   2. The effects:
      *a.* On the wood supply
      *b.* On freshets and floods
      *c.* On washouts
      *d.* On droughts
      *e.* On water power
   3. The remedy

**Forests of the United States.** — One of the chief assets of a nation is its natural forest wealth. Although forests are usually thought of as sources of lumber supply, their greatest value lies in the part they play in the conservation of soil moisture. While lumber is important and present civilization largely depends upon it, substitutes for wood may be found. But for soil moisture there is no substitute; every crop of grain, vegetables, and

**Their importance.**

fruit depends upon it. Its conservation, therefore, is a matter of vital importance. In addition to maintaining soil moisture, forests, by insuring a regular stream flow, guarantee constant water power and regular water transportation. Considering, therefore, their direct and indirect value, forests serve perhaps more useful purposes than any other natural resource.

A forest survey of the United States shows that five groups of states embrace the naturally timbered areas of the country, — the Northeastern States, the Southern States, the Lake States, the Rocky Mountain States, and the Pacific States. **Groups of forests:**

In the Northeast district the present stand is mainly spruce, second growth of white pine, hemlock, and hard woods. For many years the most characteristic tree of this forest was the white pine, a tree that has long enjoyed great commercial importance. The chief district where this tree grows in marked abundance is in the confines of northern United States. This white pine is soft, light, easily worked, suitable for the cabinetmaker, joiner, carpenter, and pattern maker. Formerly this wood was used for general construction to a greater extent than any other wood in the United States. But white pine is now becoming so scarce that the best grades cost more than good mahogany. In this Northeastern Forest another tree is worthy of mention, — the spruce, which is extensively used for wood pulp. *The Northeast Forest.*

In the South are found four types of forest, which broadly speaking may be said to divide the land among them according to elevation above sea level. The swamp forests of the Atlantic and Gulf coasts and the bottom lands of the rivers furnish cypress and hard woods. The remainder of the

coastal plain from Virginia to Texas was originally covered with "Southern" or "yellow" pine, — the trade name under which the lumber of several pines is now marketed. The plateau encircling the Appalachian range and the lower parts of the mountain region itself support a hardwood forest, while the higher ridges are occupied by conifers, — mainly spruce, white pine, and hemlock.

*The Southern Forest.*

The Lake States still contain many hardwood forests in their southern portions. In the north the coniferous forest includes, besides the rapidly dwindling pine, considerable tamarack, cedar, and hemlock.

*The Lake State Forest.*

The forests of the Rockies occupy isolated mountain chains separated by grazing lands, deserts, or cultivated valleys. The location of these isolated patches of forests is determined largely by the degree of moisture and the presence or absence of forest fires. The chief timber trees of this belt are Western yellow pine, a species of spruce, and the red fir.

*The Rocky Mountain Forest.*

The last great stretch of woodland is the Pacific Coast Forest, extending along the coast west of the Rocky Mountain Forest, and running through the States of California, Washington, and Oregon. This forest is the most densely timbered of any in the country, perhaps in the world. The characteristic trees of the district are of the fir species, especially that known as the Douglas fir. Other trees found in addition to the Douglas fir are the Western hemlock, Western yellow pine, redwood, and cedar. Thus the forest areas of the United States contain a wide range of both conifers and hard woods.

*The Pacific Coast Forest.*

The United States was endowed originally with rich forest

resources; but, like a spendthrift, the nation has consumed these riches in an extravagant fashion. According to government figures the population of the United States from 1880 to 1900 increased fifty-two per cent, while the increase in lumber cut during the same period was no less than ninety-four per cent. Our present annual consumption of wood in all forms is more than three times as great as the annual growth of our forests. So great has been this increase in the consumption of wood that the source of supply has steadily shifted westward until to-day the product of the Pacific States furnishes a large proportion of the total output of the country.

Our use of wood.

**Destruction of Forests.** — Because so many forest tracts have been cut over and left desolate, the United States has now reached a point where its remaining forests are vitally important. This forest destruction may be said to have resulted, first, from the effect of our early attitude toward forests. To the American settler the forest was an enemy. Not only did it stand in the way of the development of agriculture, but it sheltered Indians and wild beasts. Therefore, the settler naturally said, "Why take care of an enemy?" Accordingly, he began as rapidly as possible to clear the land of forests and to devote it to the purpose of sustaining life. In this way a habit of mind was engendered that has had its logical outcome in the action of the "timber butcher," who clears the land of everything "ten inches through and eighteen inches from the ground."

Causes: *Effect of early attitude.*

Another cause of the destruction of forests is the spread of forest fires, against which no local scientific means of prevention has been taken. This loss from fire is estimated at fifty million dollars annually. In unsettled districts the sparks

from locomotives start these fires, which, unchecked except by adverse wind and natural barriers, gain good headway before they are discovered and burn over thousands of acres. This was the case in 1894 with the Hinckley fire in Minnesota, which destroyed twenty-five million dollars' worth of property and over four hundred lives. This fire smoldered for two weeks before a high wind came and drove it fiercely through the forests. At any time during these two weeks an effort on the part of skilled foresters could have extinguished the fire and saved the lives and property later sacrificed.

*Forest fires.*

Having seen the causes of forest destruction, let us now inquire into its effects. Naturally the first result of the ruthless cutting and destruction of timber is to deprive the community of its supply of wood. Experts tell us that, at our present rate of consumption, our supply of commercial timber will last only thirty years. This problem, while very serious in itself, might be solved through the importation of wood. There is, however, another phase of the question still graver in its aspect.

**Effects:** *On wood supply.*

When a mountain range is cut clean of timber, the brush and limbs are left scattered over the bare tract. A dry season comes and a passing hunter drops a match or a locomotive throws a spark among this brush. The consequence, as we have seen, is a forest fire. The fire, supplied with the most combustible materials in the way of dried branches and leaves, burns fiercely. Most of the vegetable matter is removed from the top of the ground, and the surface of the earth is baked hard. Then comes a rain, which, instead of soaking into the ground as it ordinarily does in a wooded district, runs off rapidly into

*On freshets and floods.*

the streams, causing a freshet. If the rain has been extensive enough and covered a large tract of country, the result is a flood of serious proportions.

Again, in agricultural districts where the timber has been cut from the top of hills, a heavy rain, running off rapidly, washes the soil from the slopes down into the valleys. One of the great problems which mountain farmers, who have allowed their timber to be removed, now face, is that of preventing washouts on the sloping fields. *On washouts.*

There is still another phase of the problem. As it exists in nature, the spongy vegetable matter in the forests holds the water which falls in rainy seasons and allows it to filter gradually off into the springs and streams during the drier times. In many agricultural regions drought is becoming a serious problem during the late summer months. In districts where forests have been removed men are surprised to find that the springs and streams dry up in the summer. *On droughts.*

Finally, the results of deforestation are not all direct. The industries of the country are depending more and more upon water power as a motive force. In districts where turbines have been set up and water power is being converted into electricity, low streams in the dry summer months force the factories to close temporarily. One of the greatest drawbacks to generating power on small streams, therefore, is that they are flooded with water in the spring and empty in the fall. If there were timber land at the head waters, both conditions would be obviated. *On water power.*

Thus we see that a shortage of timber supply, with a consequent rise in the price of lumber, disastrous freshets and floods, the washing away of sloping agricultural lands, and

the failure of springs and streams are all phenomena resulting from deforestation.

These evils can be remedied only by a vigorous policy of conserving our existing forests and by entering upon a national campaign of reforestation. If the timber supply of the country will last but thirty years, it is absolutely necessary that every stick of it should be guarded, that it should not be wantonly destroyed through forest fires or timber cutting, and that proper provision should be made for replacing every tree consumed. To meet this situation state action is inadequate; a comprehensive national policy is imperative. The United States must follow the example of European countries and insist upon a rigid policy of conservation.

**The remedy.**

## TOPICS FOR CLASS DISCUSSION

1. Explain the importance of the forest as a natural resource.
2. What is the relation between deforestation and floods?
3. What is scientific forestry?
4. Describe the German forestry service.
5. What could scientific forestry do for the United States?
6. What steps have thus far been taken?
7. What justification can be advanced for the government forest reserves?
8. Outline the economic advantages of preserving the forests.

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## CHAPTER IX

### Water Resources

I. Water as a source of power
   1. Its early use
   2. Why used to-day
   3. Method of utilization
   4. Examples of utilization:
      *a.* At Niagara Falls
      *b.* On the Pacific Coast
      *c.* In the future
   5. The problem arising from it

II. Water as a means of transportation
   1. Our inland waterways:
      *a.* Their great extent
      *b.* Their early importance
      *c.* Why valuable to-day
      *d.* Effect of Panama Canal
      *e.* Water transportation cheap
   2. Problems of the Mississippi River:
      *a.* The cutting of its banks:
         (1) The cause
         (2) The remedy
      *b.* The flooding of the river:
         (1) The cause
         (2) The remedy
      *c.* The cost of conservation

In addition to harbors, there are two other water resources of great value to a nation. The first of these is water power; the second is water transportation. Both have

been utilized in some form throughout historic times, yet to-day, in the United States, they are contributing only a fraction of their full quota to human welfare.

**Water as a Source of Power.** — One of the resources which the early colonists found in comparative abundance was water power. Throughout New England and in certain parts of the South, there were innumerable streams which had a high gradient and from which considerable water power could be developed. Therefore, when manufacturing was begun in the colonies, the power used was naturally water power. The water wheel was set down directly on the stream, a race was constructed, and the revolving wheel connected by belts and shafts with the machinery in the mill.

**Its early use.**

However, the application of steam to industry, the discovery of coal, and the development of steam-propelled machinery, which came between 1750 and 1800, completely revolutionized the source of power utilized in American industries. When the great coal beds were discovered, there was an immediate rush to exploit them; and during the nineteenth century the United States occupied itself in mining coal as fast as it could be used in industry. Toward the end of the century, however, a change occurred which very materially altered the situation. Coal, particularly anthracite coal, rose in price to figures which became almost prohibitive in certain industries. The situation was also aggravated by labor troubles which rendered the coal supply at times uncertain. In addition to this, experts declared that the available supply of coal in the United States would be exhausted in from forty to one hundred years.

**Why used to-day.**

Under these circumstances, attention was once more

directed toward the utilization of water as a source of power. The developing knowledge of electrical appliances made possible a revolution in methods of using water power. The old waterwheel was abandoned; electric turbines were installed at the stream, the water power was converted into electricity, and then transported over wires for great distances.

**Method of utilization.**

The most noteworthy instance of this conversion of water power into electricity is seen at Niagara Falls. Here are situated two plants. The one below the Falls on the American side is located in the Gorge. The water for its use is drawn from the upper Niagara River, run through the city of Niagara Falls, and discharged near the first Suspension Bridge. This plant is so situated as to be able to utilize a fall of two hundred and fifteen feet of water. However, it has certain obvious disadvantages. First, its buildings disfigure the Gorge; and in the second place, the plant is difficult of access.

**Examples: *Niagara Falls.***

The power plant above the Falls is a rather novel one. To construct it a pit one hundred and fifty feet deep was dug in the solid rock and at the bottom of this pit the turbines were placed. The motion generated in the turbines was returned to the electric generators at the surface by means of steel shafts. The power generated at the Falls supplies not only the industrial plants in the immediate neighborhood, but the electricity is carried to Buffalo, where it is used for trolley cars, for street and house lighting, grain elevators, and factories.

While this is the most notable example in the country of the development of water power, the Pacific Coast also presents instances of its utilization. The important thing about Niagara Falls is the volume of its water. On the

Pacific Coast there are no bodies of water so large, but the fall which is secured is very great. For example, a part of the electric power used at San Francisco is supplied from a plant located at the foot of a hill five hundred feet high, down which the water for the generation of the electricity is carried in steel tubes. The velocity of the water when it reaches the power plant is stated at fourteen thousand feet per minute. After the power has been generated in this plant, it is carried one hundred and fifty miles at a pressure of from forty thousand to eighty thousand volts with a loss of about one-fourth of the power.

*On the Pacific Coast.*

There are many other sections of the country where in the future the use of water power may become general. The falls at Sault Ste. Marie between Lake Huron and Lake Superior have a drop of only twenty feet, and yet the volume of water is so enormous as to make possible the development of a great amount of power. Likewise, the innumerable small rivers along the Altantic Coast furnish in the aggregate a considerable source of water power. Again, those who propose regulating the flow of the Mississippi River by the construction of reservoirs at its head waters estimate that from these reservoirs about fifty million horse power may be developed.

*In the future.*

The real impetus to the use of water power in modern industry was given in the last decade of the nineteenth century, when it was found that, by means of it, electricity might be cheaply generated and then carried great distances for commercial purposes. Indeed, the possibilities of water power have become so great that many conservationists who are working for the proper care of natural resources have shifted their emphasis from forests and minerals to water power. This

**The resulting problem.**

they have done because they realize that individuals and corporations, through a monopoly of water power sites, might secure an unshakable grip on the natural resources of the country.

**Water as a Means of Transportation.** — Quite a different problem is presented by water transportation. Here, there is no danger of monopoly, since the ownership of the transportation facilities already lies in the federal government. In the United States, therefore, the problem of water transportation is solely a problem of wise use and development.

Nowhere in the world is there a duplicate of the inland waterways of the United States. On the north lie the Great Lakes, which provide eighteen hundred miles of navigable water; on the east and west coasts are numerous small, navigable streams. In the heart of the continent, reaching into twenty-two of the States, is the Mississippi River System, which is navigable for thousands of miles. Although the twenty-two States reached by the Mississippi River System furnish seventy-five per cent of all the exports of the United States, the bulk of the agricultural products, and two-thirds of the manufactured products, the river system is but little used for transportation.

**Inland waterways: *Their great extent.***

The early colonists depended upon water transportation as they did upon water power, because of the abundance of water and also because there was no other easy means of getting from place to place. The few roads that existed were wretched. Therefore the streams became the highways of trade and travel, and settlements were made either on the coast or along rivers.

***Their early importance.***

The application of steam to industry led to the gradual abandonment of both water power and water transportation.

In both cases, however, the time has now been reached when steam power will no longer suffice, and, in order to maintain our industrial efficiency, it has become necessary to fall back upon natural power. In both cases, likewise, the diminution of the coal supply has played a leading part. In the case of transportation, however, there is another factor of even greater importance. In prosperous years the railroads of the country are unable to handle the freight traffic. Some other means of transportation is therefore inevitable.

*Why valuable to-day.*

The value of our inland waterways will be enhanced by the opening of the Panama Canal and by the development of trade with South America. This combination of circumstances will make the Gulf the natural outlet for a great amount of the produce of the Mississippi Basin. If to this fact is added the ease with which heavy freight may be shipped by water, it is plain that logically a great portion of the Mississippi Basin's heavier products should go to the Gulf by water.

*Effect of Panama Canal.*

Some idea of the relative cost of shipping by rail and by water may be gained from the statement that in 1905 forty-four million tons of commerce passed through the locks of the Sault Ste. Marie Canal between Lake Superior and Lake Huron. This tonnage was carried for an average rate of .85 mills per ton per mile. The average freight charge per ton per mile on the railroads of the United States during 1905 was 7.6 mills, or about nine times as great as the water rate for the Great Lakes. The same idea is brought out by a contrast between two Pittsburg rates. Between Pittsburg and Lake Erie there is a commerce, composed chiefly of iron ore and coal, amounting annually to about 30,000,000 tons.

*Water transportation cheap.*

The ore is carried by boat from Duluth on Lake Superior to Ashtabula on Lake Erie, a distance of one thousand miles, for about eighty cents per ton. The ore is then loaded on cars and carried to Pittsburg, a distance of one hundred and thirty-five miles, for ninety cents per ton, so that it costs ten cents more to ship a ton one hundred and thirty-five miles by rail than it does a thousand miles by water.

Thus water transportation possesses a great advantage over land transportation. To realize the full possibilities of transportation by water, however, we must make many improvements in the Mississippi River. In fact this river presents some serious problems. It is a stream of bad habits, the worst of which are the cutting of its banks, the formation of sand bars in its channel, and the severity of its floods.

**Problems of the Mississippi:**

The cutting of the banks is due to curves, technically called "meanders," and to the river's digging under the bank on the outside of the curve, particularly during flood times. Sometimes this cutting amounts to one hundred or one hundred and fifty feet a year. As the channel is necessarily on the outside of the curve, and as grain elevators, docks, and other instruments of traffic must be reached by means of this channel, it is obviously impossible to carry on commerce satisfactorily if the river is undercutting the docks and elevators at the rate of one hundred feet a year.

***Cutting of the banks.***

The river can never be successfully prevented from cutting its banks until it is straightened. This may seem almost impossible; but several of the German rivers which were particular offenders in this respect have been straightened, and in the process the rivers were made narrower, the change resulting in a higher gradient and a more rapid current.

Besides straightening the river, we can control its seasonal floods. Spring floods and summer droughts are due in great part to the deforestation of the mountainous country at the head waters of rivers. Great areas of land at the head waters of the Mississippi and its tributaries have been practically deforested. Consequently, in rainy seasons, the water rushes off from the soil into the streams and causes flood damage farther down. Reforestation would eliminate much of the danger. The work may further be facilitated by the building of storage dams which will check the floods and allow the surplus water to flow gradually down through the lower courses of the rivers.

*Flooding of the river.*

The straightening of the Mississippi, the reforesting of the hills at its head waters, and the building of storage dams on its principal tributaries to control floods may cost one hundred or two hundred or even three hundred million dollars, but, if the full possibilities of the Mississippi Basin are to be realized, sooner or later these changes must be made. The development of water transportation will involve in the United States, as it has involved in Europe, a great outlay of capital; but if the experience of England and Germany furnishes any basis for judgment, the outlay, even though it be a great one, will be more than justified.

*Cost of conservation.*

## TOPICS FOR CLASS DISCUSSION

1. Why was water power used extensively by the early colonists?
2. What led manufacturers to replace water power by steam?
3. What is there in the present development that shows a tendency toward the increased use of water power?
4. What advantages has the use of modern water power over modern steam power?

5. What advantage has steam power over water?
6. In what respect does a reversion to water power show progress?
7. What steps must be taken to secure the most economic use of water power?
8. How important were inland waterways before 1830?
9. Contrast the relative merits of the railroad and the inland waterway.
10. Why are the people of the United States laying new emphasis on inland water transportation?
11. Name the leading inland waterway systems of the United States.

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## CHAPTER X

### American Labor

I. Nature of labor
   1. Importance of labor:
      *a.* In production
      *b.* In the city
      *c.* In the country
      *d.* In modern industry
   2. Meaning of labor
   3. Conservation of labor:
      *a.* Reason for conservation
      *b.* How effected:
         (1) Negatively
         (2) Positively

II. The labor force of the United States
   1. Its origin:
      *a.* The people of New England:
         (1) Their characteristics
         (2) Their similarity
         (3) Their occupations
      *b.* The people of the Middle colonies:
         (1) Elements in the population
         (2) Their characteristics
         (3) Why they developed industry
      *c.* The people of the South:
         (1) The agricultural conditions
         (2) Why slavery existed
      *d.* The conclusion
   2. Later sources:
      *a.* The newer elements:
         (1) From northwestern and central Europe
         (2) From southeastern Europe
         (3) From Canada
      *b.* The resulting problem

**Nature of Labor.** — There are three factors in production, — land, labor, and capital. A survey of the natural resources of the United States, of the soil, climate, minerals, forests, and waterways, must necessarily be followed by a discussion of the second essential to production, — labor. The United States abounds in resources. To convert these resources into economic goods, labor is required. Labor has changed the face of the earth and nowhere is this more noticeable than in the city.

**Its importance:** *In production.*

Indeed, the modern city is almost wholly the product of labor. In primitive societies, where men live by hunting and fishing, nature supplies nearly everything. Even in the country districts to-day the trees, the grass, the flowers, the rich soil, the springs, the waterways, the clear sky, and the clean air are nature's gift. But in the city, natural things have been altered. The trees, the flowers, and even the green grass are artificially placed and protected by warning signs. Water can no longer be secured from a near-by spring. It has been pumped into a reservoir or run through an aqueduct to meet the city's needs. Even the sky and air are polluted by smoke and dust.

*In the city.*

In short, the man who comes to the modern city and looks at it analytically will discover that natural things are at a premium. Labor has shaped everything within sight. But evidences of labor do not appear in cities alone. The man plowing his ten-acre lot is laboring. The farmer's reaping machine, his house and barn, his macadamized road, his asparagus bed, his peach orchard, — all these represent an outlay of labor.

*In the country.*

Again, modern industry is based on labor coöperation. The chair upon which you are sitting is the direct or indirect

result of the labor of thousands of men, women, and children. It was cut as standing timber in the woods of Michigan with axes and saws made in New England factories. It was hauled to a sawmill on bobsleds, the bolts of which were manufactured in Philadelphia, while the steel runners were made in Pittsburg. It was sawed by a band saw which in turn was produced in a great factory, employing several thousand men. Then, in the form of sawed lumber, this chair was shipped to a furniture mill over a railroad employing a hundred thousand men. When it reached the furniture factory, the lumber went through a great number of processes until it was converted into a chair; and each tool in each process was manufactured in a different city in a different part of the country by a different set of employees. Finally, the finished chair was shipped on a great railway system to the city, where it was handled by a trucking company, delivered to the wholesale house, sold to the retail house, and eventually purchased by the present owner.

*In modern industry.*

Labor is one of the foundation stones of modern industry. Without labor, natural resources would be useless. Labor bears the same relation to land that mortar does to bricks; it brings natural resources together into a permanent structure.

In economics, when we speak of labor, we do not mean merely manual labor, but all effort either mental or physical which is expended in producing economic utilities. The man who works with a pick and shovel is a laborer; so is the woman who works with a needle; so is the man who works with the pen; so is the man who works with a brush; so is the man who spends his time in directing the energies of others in order that they may assist

**Meaning of labor.**

in production. All of these men are "laborers" in the economic sense because the laborer is the man who expends physical or mental effort in the creation of economic utilities.

Labor is therefore an essential element in the production of wealth and in the maintenance of welfare, and every effort should be directed towards its conservation. Since the conservation principle demands that the things of the present be used wisely and handed on to the future in the best possible condition, it may be applied to labor in exactly the same way that it is applied to natural resources. **Conservation of labor:**

If men and women are overworked, badly fed, poorly housed, their efficiency will be lowered and hence their ability to secure income will be lessened. As the family standard is low, the standard of their children will be low from birth. Thus the inefficiency and low standards of one generation will be reflected in decreased efficiency and lower standards in the next generation; so that the evil conditions, which play so large a part in making men and women evil, will be perpetuated. Hence arises the necessity of adopting some policy of conserving the labor force of the country. *Reason for conservation.*

Both the welfare of the community and the efficiency of labor depend upon labor conservation. How then may this conservation be effected? Chiefly in two ways, — either through negative or positive measures. On the negative side, certain factors, like bad living conditions and insanitary or dangerous working conditions, must be corrected by purely repressive legislation. For example, laws are needed which will regulate the length of the working day; which will insure abundance of air and sunlight in both houses and factories; which will protect *How effected.*

women and children against industrial risks and accidents. This, however, is only one side of the question. It is no less desirable that the positive factors in the problem be considered. Welfare and efficiency depend upon education. Men in ignorance of working methods cannot do good work, and, since work to-day requires intelligence, it follows that the educated man will be the best worker. Furthermore, modern work, besides being arduous and monotonous, is wearing; hence some form of recreation and relaxation must be provided in order that efficiency may be maintained.

**The Labor Force of the United States.** — Since the American Indian has never done consistent work, American labor is wholly of foreign origin. From the middle of the seventeenth century until the present time, the country has been recruiting its labor from various parts of the world.

**Origin:**

In the New England colonies the Puritan element predominated. Stern ideas of living, an abhorrence of pleasure, and a strong sense of the holiness of work characterized this group. The Puritans came largely from the cities of England, where they were artisans and tradespeople. Their religion gave them deep convictions and high moral standards, and they were persistent in their efforts to achieve any end upon which they bent their energies. They adapted themselves easily to the new surroundings, forming a strong and persistent type of man and woman well calculated to overcome the difficulties incident to the conquest of a wilderness. Because of their independence in religious and political matters, they developed into strong individualists.

*The New England colonists.*

These early immigrants from England, together with those who came later from Scandinavia and north central

Europe, made up a population whose home institutions and racial ideals were so nearly alike that there was no difficulty in welding them into a homogeneous group. Each new element which arrived from Europe was readily assimilated and formed an integral part of this solid mass.

This New England population very readily conquered the adverse conditions of northern geography and climate. They built ships because shipbuilding materials and harbors were abundant. They traded with the West Indies because the fish which they caught all along the coast formed an exchangeable commodity when salted and transported into the southern countries. They carried on manufacturing because the numerous rivers supplied much valuable water power. In short, the New England population measured up to the demands of the new surroundings and utilized them in a manner beneficial to themselves.

*The Middle colonists.*

While the people who came to New York, Pennsylvania, New Jersey, and Delaware were of a somewhat different group, the basic elements of this population were the same as those of the New England settlers. The Quakers of Pennsylvania, New Jersey, and Delaware came largely from England. They were soon joined by groups of Germans, Swedes, and Scotch-Irish, who settled on the land, developed the agricultural resources, and paid considerable attention to the establishment of manufacturing. In New York the Dutch were the first settlers, but they soon were reënforced by groups of English and Germans.

Therefore, it may be seen that the general characteristics of the New England settlers were distributed pretty freely throughout the Middle Atlantic colonists. Many of the newcomers came to America because they believed in a political or religious principle and were willing to make

sacrifices for it. If to these qualities are added the perseverance and adaptability for which the New England colonists have become justly famous, a reasonable picture of this middle group is presented.

The people of the Middle colonies, like those of New England, developed industry rather than agriculture for two reasons, — first, because their agricultural land was inferior in quality, and, secondly, because the opportunities for developing industry were so abundant. Not only could ships be built, but fishing could be carried on profitably. It was later discovered, too, that the deposits of iron could be worked, that hides could be manufactured into various products, and that the textile industry was not only possible but lucrative.

In the Southern colonies, agricultural land was abundant and fertile. Then, too, the climate was suited to the production of tobacco, rice, indigo, and cotton. While industrial resources were slightly developed, the South devoted a great portion of its energy to agriculture because from that occupation the greatest gains could be secured. Then, too, the land in the North was divided into small holdings, while in the South the land was laid out in large plantations worked by indentured servants and slaves.

*The Southern colonists.*

Slavery did not prevail in the North because there was no economic way in which the slave could be used. Slavery is desirable only when a large number of men can be worked together under the charge of an overseer. In industry this is not possible. But since it is possible in agriculture, large groups of slaves were used profitably throughout the South. While the labor force of the North was composed almost exclusively of people working for their own

advancement, that of the South consisted chiefly of three classes, — the landowners, the indentured servants, and the slaves.

The early population of the United States was drawn almost exclusively from Africa and northwestern Europe. With the exception of the slaves, nearly all of those who came to America were members of one of the Baltic stocks. They had all developed their ideas and ideals in the same general part of the world and along the same general lines. In the North these settlers were therefore easily assimilated and developed into one compact group. In the South, however, the presence of a body of people who could not assimilate with the whites made the development of a homogeneous group impossible. *The conclusion.*

By the middle of the nineteenth century new population elements migrated. Between 1840 and 1850 the food shortage in Ireland sent millions of immigrants to the United States. Between 1850 and 1880 the political and economic disturbances in Germany were responsible for the immigration of millions more. Since 1880, however, the source of immigration has been gradually shifted from northwestern Europe to southeastern Europe. Besides this European shift, bringing Slavs and Italians to the Central States, a large number of French Canadians have also come into New England. Thus, while the Baltic countries of Europe furnished the early American immigrant, the central and southern European countries are responsible for most of those who have migrated during the last three decades. **Later sources:** *The newer elements.*

In 1900 there were, roughly speaking, thirty million wage earners in the United states. Of this number, six millions were born abroad, while five millions were born in this

country of foreign parents. Thus, a large portion of our labor force, even at the present day, is made up, not of native Americans, but of foreigners or the children of foreigners. If we are to maintain the efficiency of labor, the problem which we are now confronting is to instill into this labor population the capacity for work, the power of application, the intelligence, the energy, the perseverance, and the adaptability in developing natural resources which characterized the early settlers.

*The resulting problem.*

TOPICS FOR CLASS DISCUSSION

1. To what extent is labor essential in production?
2. What is the relation between the amount of labor expended on an article and its selling price?
3. Should labor be the sole element in determining the cost of an article?
4. Has labor become more or less important with the development of machinery?
5. Does the average street laborer work hard?
6. Of the street laborers that you have observed, which race works hardest?
7. What environmental advantages have American laborers over laborers in Europe?
8. Point out the most salient characteristics in the original labor force of the country.
9. Can a distinction be made between the original labor force of the country and the group of immigrants at present coming to the country?
10. Has the Anglo-Saxon race any peculiar economic characteristics?
11. Upon what grounds do Anglo-Saxons base their claim to leadership?
12. What steps can the country take to Americanize immigrants?
13. What traits do the immigrants possess that are not possessed by Americans?

14. Will immigration be of ultimate economic advantage to the United States?

15. Which do you consider more important: conservation of human energy or conservation of natural resources?

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# CHAPTER XI

## Immigration

I. Causes of immigration
   1. The object in view
   2. Military and industrial reasons:
      *a.* The European need
      *b.* The American need
   3. Political and religious aspect:
      *a.* The early cause of immigration
      *b.* How it reappears to-day

II. Effects of immigration
   1. From a racial standpoint:
      *a.* The groups of immigrants
      *b.* The character of the immigrants:
         (1) Difference between Northern and Southern races
         (2) Why Northern races are preferable
         (3) What the new elements may bring
   2. From an industrial standpoint:
      *a.* The labor affected
      *b.* Effect of immigrant's standard
      *c.* Findings of the commission
      *d.* The conclusion

**Causes of Immigration.** — The peaceful migration of great numbers of people from one nation to another is a modern phase of an old problem. Formerly, if a land flowed with milk and honey, kings led their armies against it, enslaved or drove out the inhabitants, and took possession of the fields and cattle. Under such circumstances the movement of a few thousand men from one State to another constituted a menace to social

**Object in view.**

welfare. But to-day millions of persons move from one nation to another without attracting more than passing notice. The movement, instead of being warlike, takes the form of a peaceful conquest of natural resources.

The monarchs of the Old World in order to insure the permanence of a large emergency army wish to keep at home as many of their subjects as possible. This necessity of military service is one of the great causes of emigration from Europe. On the other hand, in America, we do not emphasize an increase in our military army, but we do look continually for an increase in our industrial army. It is upon industrial recruits that we depend, just as the European sovereign depends upon military organization. The immigration of a group of strong, intelligent men and women, therefore, makes a welcome addition to the ranks of American labor.

**Military and industrial reasons.**

Religious and political persecution furnish another motive for emigration. The best elements among the early colonists left the Old World because they could not secure there a reasonable toleration of their political or religious views. They were progressive thinkers, — men who had so great faith in their convictions that they were willing to leave their mother country and make a new home in a new world. A study of present immigration shows that some people, notably the Jews, are still coming to America for the same reasons.

**Political and religious aspect.**

**Effects of Immigration.** — In order to understand clearly the effect of immigration, we must first know the character of the immigrant. The three groups of European races, — the Baltic or Northwestern races; the Alpine or central European races; and the Mediterranean or Southern races, — differ some-

**From a racial standpoint:** *Groups of immigrants.*

what. From the Baltic races have come the Scandinavians, the Germans, the English and allied groups; from the Central European races, the Slavs, Russian Jews, Austrians, and Hungarians; while from the Mediterranean countries have come the Italians, the Greeks, and the Syrians.

*Character of immigrants.*

With this change in the source of immigration from the northwest to the southeast of Europe there has been a corresponding change in the character of the immigrants themselves. The Baltic races were more highly educated, more easily adaptable to new surroundings, and, in addition to these two valuable characteristics, furnished a large number of skilled artisans and mechanics. In contrast with them, the Alpine and Mediterranean peoples show a high percentage of illiteracy and are prepared to do little except unskilled work.

Whether one race is inherently more efficient than another we are not prepared to decide. It is apparent, however, that at the present time the immigrants of northern Europe are better educated and better adapted to our standards than the immigrants of southern Europe. The North Europeans are more in sympathy with our political and industrial methods because their institutions approximate more closely to ours than do the institutions of southern Europe.

On the other hand, it is questionable whether the various groups of immigrants are not bringing to this country something which it really needs. For example, the Polish race is essentially musical and its æsthetic standards are very high; the Russian Jews are highly intellectual; and the Italians are bringing to America artistic ability of a high order. If these various qualities, which have been more highly devel-

oped in some countries than in others, can be combined with the industrial efficiency of the American, the result may be a race of people more advanced than the world has ever known.

Apart from the racial contribution which the immigrant makes to this country, what is his effect upon the wage-working part of our population? Disregarding the children of the immigrant, who enjoy the benefit of the public school system, and considering only the untutored immigrant himself, it is clear that the average unskilled immigrant can have little or no effect except upon semi-skilled and unskilled labor.

**From an industrial standpoint:** *The labor affected.*

The Russian, Hungarian, or Italian immigrant comes from a country where the standard of living of the working population is low. To him, windows and doors are often luxuries. In some places in Russia even a wooden floor is considered a boon. Consequently, to many of the immigrants, the tenement house of our great cities is a paradise. The immigrant will work for a low wage because he is accustomed to poor food and a small amount of clothing. The presence of large numbers of immigrants in any community will therefore result in a temporary lowering of the wage standard. In many localities this has actually happened. As a result, it is rare in those localities to find American-born persons working as common laborers, because, accustomed to a high standard, they are unable to exist on the wage which the immigrant will accept.

*Immigrant's standard and its effect.*

The Immigration Commission, which made its report to Congress after an extended inquiry into the various sources, character, and effects of immigration, concluded that the present immigration was detrimental to the best interests of the United States. Modern immigration, the Commission

holds, tends to lower social and industrial standards. The immigrant, a low-standard man in the country from which he comes, fails to grasp the significance of the higher American standards. He is willing to live in more congested quarters, to accept a lower standard of diet, and to work for less wages. The American, accustomed to higher standards, is unwilling to come down to the lower level. In the competition which follows he is inevitably beaten because he must either lose his position or accept the standard set by the immigrant.

*Findings of the Commission.*

Therefore, whatever the ultimate effect of immigration, its present influence is clear. In the future the immigrant, or at least his American-taught children, will doubtless demand higher standards of life and work; but so long as a million men and women annually leave the poorer districts of Europe and bring their low standards of life to the United States, the American laborer will be confronted by a competition which will ultimately lower his standards and compel him to seek work elsewhere. It is perfectly evident, therefore, that from the standpoint of American labor, foreign immigration should be so restricted and regulated that the present standard of living of the native American may be maintained.

*The conclusion.*

## TOPICS FOR CLASS DISCUSSION

1. Point out the economic effects of immigration in the United States.
2. Would the American labor force be more efficient without the immigrant?
3. How would heavy unskilled tasks be performed if the immigrant were excluded?
4. What effect has immigration on the unskilled labor wage?

5. Would it be desirable to bar out all Chinese and Japanese immigrants?

6. Account for the low standard on which the immigrant is willing to live.

7. Will Greeks, Italians, and Poles make good American citizens?

8. What is the underlying reason for permitting immigration into the United States?

9. Name the more important motives by which persons are (*a*) induced to leave the country of their birth; (*b*) attracted to other countries.

10. Explain the great fluctuations of the movement of immigrants to the United States since 1820.

11. What change in the prevailing character of our immigrants has occurred within the last generation?

12. It is argued that cheap immigrant labor is like machinery — an added aid in production which relieves the (native) laboring class from heavy and disagreeable toil. Is the analogy true?

13. Will the present immigration be of ultimate economic advantage to the United States?

14. Is the manufacturer's argument for cheap immigrants valid from the point of view of society in general?

15. Should immigration be restricted? If restrictions are imposed, should they limit the number of immigrants, or fix a test of the quality of immigrants, or do both?

16. Would restriction of immigration be justified if the congestion of immigrants in cities and along the seaboard could be prevented, and the foreign elements distributed over the whole country?

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## CHAPTER XII

### The Risks of Labor

I. Industrial accidents
   1. Kinds of accidents:
      *a.* Railroad accidents:
         (1) Their number
         (2) The causes
         (3) The remedy
      *b.* Mining accidents:
         (1) Their number
         (2) The situation abroad
         (3) The remedy
      *c.* Factory accidents
      *d.* Building accidents
   2. Total annual number of accidents
   3. The labor affected
   4. Effects of accidents

II. Dangerous trades
   1. Chief source of danger
   2. Danger from coal dust:
      *a.* Character of the lungs
      *b.* Effect on the lungs
      *c.* How preventable
   3. Danger from lead poisoning:
      *a.* Effects on the system
      *b.* How preventable
   4. Other dangerous trades

The risks to which labor is subjected in modern industry may be grouped under two heads: first, those involved in industrial accidents, and secondly, those arising from dangerous trades and occupations.

**Industrial Accidents.** — Industrial accidents include those catastrophes which either temporarily or permanently destroy the efficiency of the wage earner. They may be classified according to occupation as railroad, mining, factory, or building accidents.

The material regarding railroad accidents is compiled by the Interstate Commerce Commission and must be furnished by the railroads as part of their reports to the Commission. No other American accident statistics are collected in such careful detail. In 1907, 11,839 persons were killed and 111,016 injured in railway accidents. A study of the decade 1897 to 1907 shows a steady increase in the number of accidents. In 1897 one railway employee was killed for every 486 employed, while in 1907 one was killed for every 369 employed. Railroad casualties are, therefore, not only appalling in number but increasing in frequency. *Railroad accidents.*

That there is no justification whatsoever for this increase is proved by conditions in foreign countries, where the infrequency of railroad accidents is in marked contrast to our own waste of human life. The causes of this waste of life through railroad accidents are found both in individual action and in corporate management. So long as individuals are careless, accidents will occur; and so long as corporations fail to supply devices for the safety of their employees and passengers, the same result will follow.

A remarkable proof of the fact that working conditions are largely responsible for these accidents is furnished by the beneficial effect of the federal law requiring automatic couplers. In 1893, of the 20,444 casualties among trainmen, 9063, or 44.33 per cent, were "coupling accidents." But in 1908, although the total number of casualties had in-

creased almost 100 per cent, the number of accidents due to coupling had fallen to 3385, or 8.8 per cent of the total casualties. Equally effective results would doubtless be secured by other forms of federal regulation concerning the length of runs, the character of signals, and the number of working hours. Railway accidents are enormous in number, but by wise precaution and stringent legislation, they can be largely eliminated.

*Mining accidents.*

Accidents in coal mines are the most common of the mining accidents. The record of coal mine accidents in the United States is unsatisfactory because it consists merely of a collection of the reports of state mine inspectors who are in some cases anything but efficient. For 1908, 2450 miners were killed and 6772 were injured. "The death roll in the coal mines of the United States in 1908 was smaller than that in 1907, but with the exception of 1907, it was the largest in the history of the industry, while in the number of men injured the record for 1908 exceeds that of even 1907." Disregarding then the year 1907, in which the number killed was phenomenal, it is safe to say that there has been a steady increase from year to year, not only in the actual but also in the proportional number of men killed in mining accidents.

This increase cannot be accounted for merely by the growth of the mining industry. A recent bulletin on coal mine accidents dealing with conditions abroad proves this conclusively. It states: "In all the European coal-producing countries the output of coal has increased greatly during the last ten years, but the number of deaths per one thousand miners, instead of increasing as in this country, has undergone a marked and decided decrease. This decrease has been due to the effect of mining legislation in those

countries for the safeguarding and protection of the lives of the workmen, and has been made possible by government action in establishing testing stations for the study of problems relative to safety in mining, including the use of explosives."

The success of foreign governments in preventing mining accidents has been due primarily to their regulation of safety lamps and of the character and use of mine explosives. Nothing could be more elementary and simple, and yet the United States has made but little effort to meet the problem in this way.

Turning now to accidents in manufacturing, we find that, because of inefficiency and lack of uniformity in the work of state factory inspectors, it is impossible to determine accurately the total number of such accidents. However, the best statistics of factory accidents have been compiled from the reports of the New York Bureau of Labor Statistics. From 1901 to 1906 there were 39,244 accidents reported. Of this number, 864 were fatal; 6580 involved permanent disability; and 32,722 temporary disability. Thus, of the factory accidents in New York State, 2.2 per cent were fatal; 16.8 per cent involved permanent disability; 80.8 per cent temporary disability, while .2 per cent were unclassified.

*Factory accidents.*

The accidents in building trades have never been recorded except in a fragmentary form. It is therefore impossible to say anything definite regarding them. The only accurate information that can be secured comes from the unions which pay benefits. The accident features of these unions furnish material from which may be made an estimate of the number of union men killed and injured in each trade.

*Building accidents.*

Enough has been said, however, to show that the total loss to the community caused by accidents of one kind or another is enormous. An estimate of this loss has been made by Arthur B. Reeve, who places the total number of men, women, and children killed and injured each year through industrial accidents at five hundred thousand. This figure is as nearly accurate as possible, for it is arrived at by five different computations.

**Total annual number of accidents.**

It is not true, as it is currently supposed, that these accidents happen only to the careless, unskilled laborer, the immigrant, and the American of low standard. Not only is the semi-skilled trainman a victim of the railroad accident, but also the conductor and the skilled engineer. A Pittsburg investigation shows that of 440 men killed, 46 per cent were earning over fifteen dollars a week, and nearly 29 per cent over twenty dollars a week. Thus the social cost of accidents is intensified by the fact that efficient as well as inefficient workmen are victimized.

**The labor affected.**

The burden of accidents falls on the family and on the community. The accident destroys the worker. The worker is the mainstay of the family, which is itself the basis of the community. While children and old people escape industrial accidents, the breadwinners upon whom they depend for subsistence are struck down at the rate of half a million every year. Industrial accidents, therefore, constitute one of the causes of industrial inefficiency. Of the half million persons annually killed and injured, the majority are wage earners with families depending upon them. Their death or injury, therefore, affects the efficiency of the coming generation.

**Effects of accidents.**

**Dangerous Trades.** — Another danger to which labor is subjected results from the nature of the occupation.

While fortunately not numerous, certain trades do exist where the death rate is several times higher than the death rate in the community at large. When a workman enters such a trade and accepts such work, he signs a contract with the undertaker.

The chief source of danger in these occupations arises from the presence of dust, which, entering the system through the lungs or alimentary canal, proves injurious to the worker. Dust may also irritate the skin, but its effects here, except in the cases of antimony smelters and arsenic grinders, are usually not serious. In cases where dust enters the alimentary canal, stomach and intestinal troubles result; when it enters the lungs, tuberculosis develops. According to the industry giving rise to it, dust is of five kinds: (1) metallic dust, (2) mineral dust, (3) mixed dust, (4) animal dust, and (5) vegetable dust.

**Chief source of danger.**

Thomas Oliver in his " Dangerous Trades " says, " Were it not for dust, fumes, or gas, there would be little or no disease due to occupation, except such as might be caused by infection, the breathing of air poisoned by the emanations of fellow-workmen, and exposure to cold after working in overheated rooms." Dust, then, is the most prevalent source of danger; and its most injurious effect is on the lungs.

**Danger from coal dust:**

The normal lung is a light, spongy mass, interwoven with minute bronchial tubes. Nature planned to exclude foreign substances from these tubes by placing hair in the nose and large tubes, and by guarding the whole passage-way with the vocal chords and the cartilage plates. These devices prevent any ordinary amount of dust from reaching the lungs. But in the coal mines there

*Character of the lungs.*

is more than an ordinary amount. A visitor, long after leaving a breaker in which coal is cleaned dry, will continue to expectorate dust or coal particles which have been arrested in the larger passages. A long exposure to dust, however, dulls the sensibility of the membranes; efforts are no longer made to expectorate the dust, and the particles enter the small tubes of the lungs and become imbedded in the lung tissue.

*Effect on the lungs.*

Thomas Oliver states that "In a coal miner's lung there can be observed small masses of cells, deeply laden with carbon particles surrounded by a hardened zone of altered lung, numerous black streaks underneath the pleura or covering of the lungs, ink-like dots in the walls of the small bronchi, and enlargement with pigmentation of the bronchial glands." The entrance of dust into the lung finally converts it into "a hard and almost solid organ, incapable of carrying on the work of respiration."

*How preventable.*

A similar effect is produced by other forms of dust. Examinations show particles of grit embodied in the tissue corresponding exactly to the dust grit of the trade in which the victim worked. Therefore the man who goes to work in a dusty trade prepares his lungs for a cordial reception to tuberculosis or any other bacteria which attack weakened lung tissue. However, much can be done in the way of precaution and prevention. By screening the coal wet, the dust in the coal breaker may be reduced; and by the use of suction wheels, blowers, and other mechanical devices, the dust in the factories may be rendered less dangerous.

There are other occupations besides mining that are full of risk and danger. Certain substances used in industry

are always injurious to life and health. Among these substances none is more widely used nor more really dangerous than lead in its various forms. Lead poisoning occurs in several trades, although it is most severely felt in the manufacture of white lead. Poisoning from lead may be acute or chronic. The symptoms of both forms are colic, "wrist drop," loose teeth, and a blue line on the gums.

**Danger from lead poisoning:** *Its effects.*

Ventilation, an abundance of nutritious food, abstinence from all excess, especially alcoholic, the use of special helmets, together with short hours in the factory, all assist in decreasing the dangers from lead poisoning. There is no other industry in which the dangers are more acute and where the necessity of precaution and preventive measures should be more emphasized.

*How preventable.*

The production of phosphorus, mercury, and arsenic; the chemical trades; rag sorting; wool sorting; work in compressed air chambers, — all involve dangers of varying degree. The reference to mining and the lead industry will, however, suffice to indicate the character of dangerous trades, their effects, and the possibility of remedying them through wise preventive measures.

**Other dangerous trades.**

## TOPICS FOR CLASS DISCUSSION

1. Are industrial accidents inevitable?
2. In a case where persons are killed and injured in a wreck due primarily to a defective air brake, what should be done?
3. To what extent is the community at large responsible for accidents?
4. Where does the ultimate burden of industrial accidents rest?
5. Should a manufacturer be held personally responsible for an accident due to unguarded machinery?

6. What would be the most effective method of preventing accidents?

7. Discuss workmen's compensation as a remedy.

8. Analyze the street accidents of your city, and develop a means of prevention.

9. What is a dangerous trade?

10. Why is lead poisoning particularly disastrous?

11. What remedies exist for the dangers involved in dangerous trades?

12. Are consumers justified in using the products of such trades?

13. Several European governments have abolished the manufacture of white phosphorous matches because of the danger involved in the industry. Would the states in which white phosphorous matches are made be justified in adopting similar measures?

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## CHAPTER XIII

### Some Labor Problems

I. Child labor
   1. Its English origin
   2. Its extent in the United States
   3. Its evil consequences:
      *a.* On the child:
         (1) Physically
         (2) Mentally
         (3) Morally
      *b.* On family life
      *c.* On society
      *d.* On the product
   4. Its regulation

II. Women workers
   1. Why women enter industry:
      *a.* Minute subdivision of labor
      *b.* Acceptance of lower wages
      *c.* Loss of home employment
   2. Arguments against
   3. Arguments in favor of

III. Unemployment
   1. Causes:
      *a.* Personal causes:
         (1) Malnutrition
         (2) Sickness and accidents
      *b.* Industrial causes
   2. Effects:
      *a.* On the unemployed
      *b.* On the family
   3. The outlook

There are several labor problems which are continually before the public for discussion and solution. Prominent among them are, — (1) the problem of child labor, (2) that of women in industry, and (3) that of unemployment.

**Child Labor.** — The problem of child labor had its real origin in England in the last half of the eighteenth century when the factory system was first being developed. Manufacturers were in great need of unskilled labor to operate the new machinery. Poorhouses and orphan asylums were overcrowded with just this kind of labor. As a result, these institutions gave up their children to the manufacturers, who in certain cases even agreed to take one insane child with every twenty healthy ones. The children were quartered in barracks and worked in day and night shifts, the day shifts sleeping in the beds which the night shifts left and *vice versa*. No provision was made for sanitation, and the children were fed on the worst kind of food. These conditions, culminating in an outbreak of disease and epidemics, led to the passage of the Act of 1802 for the regulation of the health and morals of apprentices. Finally, in 1847, a much more comprehensive and effective law regulating the labor of all women and children in industry was passed.

**Its English origin.**

Child labor in the United States is merely a recurrence of an Old World phenomenon. In 1900 there were in the United States over one and three quarter millions of children between the ages of ten and fifteen employed in gainful occupations. Of these 1,750,178 children so employed, —

**Its extent in United States.**

60.7 % were engaged in agriculture;

16.2 % were engaged in manufacturing and mechanical pursuits;

15.9 % were engaged in domestic service;
6.9 % were engaged in trade and transportation;
0.2 % were engaged in professional service.

Although the largest number of children are employed in agriculture, child labor is usually associated with manufacturing, for it is here that its worst evils are manifested.

There is no doubt about the evil consequences of employing children in industry. From whatever standpoint the problem is regarded, child labor is injurious. It is harmful to the child, to family life, to society, and to the industrial product.

**Its evil consequences:**

On the physical side hard labor is injurious to young children because their bodies are still developing. Through expression, the body of the growing child is developed most surely and most completely. The originalities of a child "arise through his action, struggle, trial of things for himself and in an active way." But the child of twelve or fourteen who stands at the machine tying threads for eleven hours a day is not growing through expression. He is being narrowed by an unvarying, monotonous impression. He is losing the opportunity for the spontaneous expression of the new life that comes only through play.

*Effect on the child.*

From a mental standpoint, child labor is a process of mind-stunting. First, the child is removed from the possibility of an education. He is taken from the school and placed in the factory, where he no longer has an opportunity to learn. Then he is subjected to monotonous toil for long hours, until his mind is dwarfed into the familiar form of the unskilled workman.

The moral effects of child labor are also bad. Entering the workroom with adults of all types of morality and im-

morality, the child ceases to be a child in knowledge while it is still a child in ideas. There is no home influence or school influence to ward off the dangers, no mother or teacher to point out the hidden rocks.

*Effect on family life.*

The effects of child labor on family life are obvious. In many localities in the South, where industry is developing for the first time, the children work in the mill with their parents. If either parent stays at home, it is frequently the father. Under these circumstances the mother has no opportunity at home to maintain a family standard. Neither in their parents nor in their homes do the working children see those qualities which make the home the ideal of human happiness.

The low wages of child workers add little to the family income. It is no uncommon thing to find children working for two or three dollars a week. As late as 1902 the Anthracite Strike Commission found one girl who was given a dollar and eighty cents for sixty night hours of work.

*Effect on society.*

It is equally clear that child labor injures society. By making of the boy an unskilled worker incapable of earning large means and by making of the girl a woman incapable of becoming a strong normal mother, child labor inevitably tends to undermine social life. By throwing the boy out upon the world too early in life and making him face its responsibilities, child labor promotes delinquency. The inmates of houses of correction were usually working boys when they were arrested. The schoolboy is almost a negligible factor there. Both family and individual life are distorted by child labor.

Finally child labor affects the product of industry. The treasurer of the Alabama City Cotton Mill wrote to his agent: "Every time I visit this mill, I am impressed with

the fact that it is a great mistake to employ small help in the spinning room. Not only is it wrong from a humanitarian standpoint, but it entails an absolute loss to the mill." Child labor is thus wasteful to industry. Manufacturers everywhere are being forced to this viewpoint. Child labor is undoubtedly cheap labor, but the product is cheaper than the labor involved in its creation.

*Effect on the product.*

Consequently, from every standpoint, child labor is undesirable. It decreases family and social welfare and lowers the standards of the future citizen as well as of the industrial processes in which it exists. In view of these disastrous effects of child labor, numerous laws have been passed which aim to exclude from work children under fourteen and to safeguard the working lives of children from fourteen to sixteen.

**Regulation of child labor.**

**Women Workers.** — Another problem of growing importance is that of women in industry. A half century ago woman played an insignificant rôle in industrial life; to-day there is not an important branch of industry where she is not found. In 1900 there were about five million women employed in all forms of gainful occupations in the United States.

The causes of this advent of women into industry are obvious. First of all, the minute subdivision of labor has given rise to such a degree of specialization that there are innumerable small operations that women can easily perform. For example, a girl may paste corners on paper boxes, or stamp out pieces of paper to make Christmas cards. Without previous training, she will, in a short time, learn to manage a machine. At first her efficiency will not be high, but she will earn at least enough to keep body and soul together.

**Causes:** *Minute subdivision of labor.*

Women, having only themselves to support, are willing to accept a much lower wage than men. Therefore, when they enter industries in competition with men, the latter are frequently forced out altogether. For example, men formerly rolled cigars at the rate of seventy-five or eighty cents a hundred. Now the same labor is performed by girls at the rate of thirty-five or forty cents per hundred.

*Lower wages.*

The most potent cause of woman's entering industry, however, is found in her loss of home employment. Formerly women had so much to do at home that their time was fully occupied. Spinning, weaving, the manufacture of clothing, and the preparation of foodstuffs, all engaged their attention. But the seat of these operations has now been removed to the factory. Very little sewing is now done in the home, and the cooking is decreasing rapidly. Cleaning is the only part of "woman's sphere" left her; it is small wonder, then, that she goes to the factory to escape this drudgery.

*Loss of home employment.*

As to the advisability of woman's entering industry, opinion is divided. Those who are opposed to this tendency point out that the chief function of woman is to be a home maker and to bring up her children properly; that this work still engages enough of her time to prevent her from undertaking outside employment; that factory labor injures women, and through them, their offspring; and that finally the presence of women in industry cuts down the wages of men.

**Arguments against women working.**

On the other hand, those who are in favor of this tendency take the stand that, because of the development of the factory system, there is comparatively little left for women to do at home; that, because skill and dexterity

are chiefly required, labor is not injurious to women physically; that, by entering industry, women are made independent and equal to men so that they need not be forced into unhappy marriages; and that, finally, it is not fair to force upon woman the drudgery of cleaning and cooking which constitute so large a part of the regular housework. **Arguments in favor of.**

**Unemployment.** — The problem of the unemployed is a constant one. Unemployment may be due to personal causes, such as malnutrition, sickness, and accidents, or to industrial causes, such as industrial crises, labor troubles, and seasonal and casual trades. **Causes:**

That malnutrition is a very real cause of unemployment was well illustrated in England during the winter of 1907–1908. An unemployed farm colony was started and the unemployed from London were set to work on the land. During the first few weeks many of the men were so weak from lack of food as to be unable to do more than two or three hours' work a day and that of the poorest sort. After being maintained for several weeks on good food, these same men were doing high-class work. Just how extensive is the unemployment caused by sickness and accidents we have no way of knowing. That sickness and accidents exist is certain, and that they cause unemployment is obvious; but thus far the meager character of the material on the subject will not permit more than a bare reference to them as factors in the problem. *Personal causes.*

The industrial causes of unemployment may be grouped under the head of seasonal trades, industrial crises, labor troubles, and casual trades. Seasonal trades are common, and they inevitably mean unemployment. For example,

all outside construction work can offer employment at certain times of the year only. The effects of industrial crises and labor troubles upon unemployment are also apparent.

*Industrial causes.*

A chart of the coal industry from 1890 to 1905 shows that from 1895 to 1899 the work was very slack because of the persistence of an industrial crisis, while in 1902 because of the coal strike of that year the anthracite mines worked only one hundred and sixteen days, — about thirty-eight per cent of the total possible working days. A very frequent cause of unemployment exists in certain trades known as casual trades, — those requiring labor a day here or a week there, but never regularly or systematically.

The effects of unemployment are twofold. In the first place, the unemployed himself is affected. Idleness leads to some form of dissipation, usually drunkenness. The unemployed, in his attempt to secure work, may use freight trains as a means of getting from place to place. This happy-go-lucky life, once tasted, proves too attractive; and the laborer, freed from all restraining influences, soon becomes a confirmed tramp. If he is a skilled laborer, the unemployed will lose his "knack" of work; if unskilled, his physical strength. In any event, this idleness will be a drain upon his resources and cause his efficiency to be lowered. But the effects of unemployment do not cease with the unemployed. They extend to his family. The irregular life of the father communicates itself to the children; and the lack of food, resulting from a lack of income, means malnutrition for the whole family group.

**Effects of unemployment.**

No definite remedy can be prescribed for unemployment. So far as the personal causes are concerned, some relief

might be sought in sickness and accident insurance. This policy is pursued in many European countries. On the industrial side, the key to the situation is found in industrial stability. Interstate employment bureaus, and government work provided in times of serious depression, will do much to relieve the worst features of the present situation.

**The outlook.**

## TOPICS FOR CLASS DISCUSSION

1. What is the chief disadvantage of child labor?
2. What are the effects on children of early employment?
3. What effect has child labor on the adult laborer?
4. Is child labor necessary to the production of captains of industry?
5. What is the effect on children of keeping them away from work until they are sixteen?
6. Who is the chief gainer from child labor?
7. Who is the chief loser?
8. Are parents responsible for child labor?
9. To what extent are the children themselves responsible?
10. Why are women entering industry?
11. Is this movement justifiable?
12. Should legislation be passed to protect working women?
13. Would you permit your wife or daughter to take up a gainful occupation?
14. Is the frequently made statement true, — "woman's place is in the home?"
15. Is unemployment necessary?
16. What is the English system of labor exchanges?
17. What is the effect of unemployment on industrial efficiency?
18. On what grounds should society seek to prevent unemployment?
19. Is there any "right to work"?
20. Should the government guarantee work at all?
21. On what ground can you justify governmental interference in any of these problems?

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# CHAPTER XIV

## Education of the Worker

I. The function of education
   1. In early times
   2. In modern times:
      *a*. The changed conditions
      *b*. How met by higher education
      *c*. How met by secondary education

II. Uniformity in elementary education
   1. Extent of uniformity
   2. The consequences:
      *a*. "School mortality"
      *b*. Illiteracy
      *c*. Child labor
      *d*. Lack of preparation for life
   3. The remedy — differentiation:
      *a*. For boys and girls
      *b*. For city and country
      *c*. For head workers and hand workers
      *d*. For different trades
   4. The outlook

The most potent force for the increase of efficiency and the promotion of welfare is education — the motive force of civilized society.

**The Function of Education.** — The process of education is continuous, — it has existed in one form or another from time immemorial. In early times education was confined largely to the priesthood. Later, all classes were educated. Egypt, Greece, Rome, historic

In early times.

China, — all furnish excellent examples of well-developed educational systems performing definite functions.

Throughout the Middle Ages, education was based on the study of the classics. In the twentieth century, however, education has changed materially. Man's interests are no longer confined to one group of subjects. The study of Latin and Greek fails utterly to equip man with knowledge that will help him to solve the problems arising from the development of modern science and from the growth of industry.

**In modern times:** *The changed conditions.*

The institutions of higher learning have been the first in America to make an attempt to meet these changed conditions. Realizing the tru h of Herbert Spencer's position that the object of education is "complete living," these institutions have incorporated into their curricula courses which have a direct bearing upon the life of the individual. Schools of engineering, of commerce and industry, of agriculture, of architecture, and of like character, are all striking examples of this tendency.

*How met by higher education.*

This tendency to prepare individuals for practical life so that they may be given the basis of complete living may be observed also in secondary education, but to a less degree. In addition to the old classical high school, we now have in most of our large cities high schools with manual training, commercial, and vocational courses. Too much credit cannot be given to those pioneers in this movement, who, seeing the evolution of modern life, have attempted to make the educational system conform to its needs.

*How met by secondary education.*

**Uniformity in Elementary Education.** — It is in primary education that this modern tendency is least apparent.

The course of instruction given the child for the first eight years is largely traditional and generally uniform. It is undoubtedly true that a change here and there is being introduced, but the underlying principle remains the same. The primary school is but a ladder to the high school; the high school leads to the college. There is little attempt to make the instruction fit the child's individual needs and his own position in life. **Extent of uniformity.**

While it is true that this uniformity results in an equality of equipment for those completing the first eight years of school life, it is nevertheless disastrous to those who do not survive the rigidity of the work. Since the prescribed course is distasteful, the beginner drops out of the race before it is fairly begun. Striking evidence of this fact is found in the high percentage of elementary " school mortality." **The consequences: " *School mortality.*"**

The immediate effect of this school mortality is illiteracy. The extent of illiteracy in the United States is not generally realized. The census of 1900 enumerates 223,208 white children between the ages of ten and fourteen, born in the United States, who could neither read nor write. The same census bulletin tells us that " somewhat more than one tenth (106.6 per 1000) of the population at least ten years of age is illiterate." The importance of this statement becomes particularly significant when a comparison is made between illiteracy in the United States and in European countries. Of every thousand inhabitants in Germany, Norway, and Sweden, one is illiterate; in Switzerland, three are illiterate; in Denmark, five; in Finland, sixteen; in France, forty-nine, and in England, fifty-eight. *Illiteracy.*

Another consequence of the school's inability to hold

children because of its uniform curriculum is found in the existence of child labor. "The most potent reason, in my opinion, why children are in the factory is our school system." This statement, by a factory inspector of Louisiana, voices the opinion of many social workers who point to the school as a frequent cause of child labor. There is little doubt but that many a child prefers the work of the factory to that of the school.

*Child labor.*

Finally, the effect of uniformity in elementary education extends to a lack of preparation for life. Children leave school and go to work because the school system fails to prepare its pupils for the life of the world. Seven eighths of the school children of the United States never enter the high school. "Yet," says Dr. Andrew S. Draper, Commissioner of Education in New York, "one who goes out of the school system before the end, or at the end, of the elementary course, is not only unprepared for any vocation which will be open to him, but too commonly he is without that intellectual training which should make him eager for opportunity and incite him to the utmost effort to do just as well as he can, whatever may open to him."

*Lack of preparation for life.*

What, then, should be done to make the school system more attractive and of greater service to the average boy and girl? The answer to this question is simple. The work should be differentiated according to the needs of the individual and of the community. Different training should be provided for girls and boys, for city children and country children, for head workers and hand workers, and for workers in different trades. Life is so varied that no one training is suited to all.

**The remedy — differentiation:**

*In* the first place, there is no doubt that sex should play

a part in determining the character of education. While it is true that during certain periods of life several millions of women are engaged in industrial pursuits, woman, nevertheless, is primarily engaged in the home. Just as the great majority of boys will grow up to use their hands, so the great majority of girls will grow up to be wives and mothers. It is perfectly evident, therefore, that elementary instruction should provide one kind of training for home makers and another kind for breadwinners. A system of education which fails to recognize this principle is altogether inadequate to meet the needs of modern life.

*For boys and girls.*

Likewise, another differentiation is equally fundamental. The training of boys and girls in the city should differ essentially from the training of country boys and girls. Education, primary as well as secondary, should bear a direct relation to the adult life of the child. City conditions are so totally different from country conditions that each set of conditions demands a training peculiar to itself. Industry is the keynote of city life and agriculture the basis of country life. Therefore, the training of city people should be largely industrial and that of country folk agricultural.

*For city and country.*

It is equally obvious that in the city different training should be provided for head workers and hand workers. In general, the elementary curriculum makes provision simply for head workers. But, perhaps, three fourths or seven eighths of all the boys and girls who go through city schools will be called upon to do work with their hands. An education which prepares for complete living will, therefore, make provision for training in some form of hand work.

*For head workers and hand workers.*

The disappearance of apprenticeship from modern life

has necessarily widened the scope of industrial training in our public school system. Save in a few trades, such as plumbing, the old apprentice form of training has passed away. As a result, a new duty has been imposed upon the school.

*For different trades.*

If this differentiation in training along the lines just indicated is carried out, the elementary school, by losing its uniformity, will be brought into closer harmony with the conditions of modern life. It is only proper to say, however, that in many of our larger cities attempts are being made to bring about this closer relation between the work of the school and the work of life. For example, the introduction of sewing and cooking and of elementary manual training, the establishment of trade schools, and the organization of vocational courses are all hopeful indications of a recognition of this principle. Preparation for life, which is the ideal of the newer education, will ultimately shape the work of the elementary schools, as it has already molded the work of the high school and the university.

**The outlook.**

## TOPICS FOR CLASS DISCUSSION

1. What should be the purpose of education?
2. Should there be definite connection between the school life and life in the world?
3. What does the school in your community do to prepare boys for the work of life?
4. What life preparation does the school furnish for girls?
5. Should some form of manual training be introduced in all grades between the kindergarten and the high school?
6. Should the public school include domestic science training for girls?
7. Is universal education desirable?

8. What advantages and disadvantages would accrue to the country if free education were abolished?

9. Would it be wise to make it possible for everybody to secure a college education?

10. What has the college done to prepare men and women to meet the work of life?

11. What is the economic basis for education?

12. What changes would you suggest as prerequisites to a more useful educational system.

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# CHAPTER XV

## CAPITAL

I. Character of capital
   1. Its importance:
      *a.* In primitive times
      *b.* In modern times
   2. Examples and definition of capital
   3. How wealth may be consumed:
      *a.* Unproductively
      *b.* Productively
      *c.* The final consequences
   4. Is money capital?
      *a.* The argument
      *b.* The newer point of view
   5. Capital and "capital goods"

II. Origin of capital
   1. Capital results from saving:
      *a.* How men first saved
      *b.* How the habit spread
      *c.* How savings are capitalized:
         (1) By the bank
         (2) By individuals
         (3) By corporations
         (4) By other companies
   2. Capital may result from efficiency

III. Kinds of capital
   1. Difference between:
      *a.* Circulating and fixed capital
      *b.* Specialized and free capital

2. Danger arising from:
   *a.* Too much fixed capital
   *b.* Too much specialized capital
   *c.* Mismanagement of capital

Land, or natural resources, and labor, or human energy, are spoken of as primary essentials in production because both must be present in every productive operation. The fish in the stream and the coal on the mountain side cannot be converted into wealth if there are no people to catch the one or to pick up the other. In the same way, if there are no fish to catch and if there is no coal to mine, labor will be helpless and unable to produce wealth.

**Character of Capital.** — There is, however, still another factor in production. While land and labor are the primary essentials in any productive operation, there is a secondary essential, — capital. Capital is spoken of as secondary because it is the result of the application of labor to natural resources. If all the capital in a community were destroyed, it could be replaced by the application of labor to land. In primitive times little, if any, capital really existed. What capital we now have, therefore, is the result of man's utilization of natural resources; it is the offspring of land and labor.

**Its importance:** *In primitive times.*

Modern industry, however, requires the presence of all three factors. To-day, capital is as essential to production as land and labor. All modern productive operations are capitalistic. It is impossible to conceive that a present-day productive enterprise should be carried on without the aid of capital. The old primitive methods have gone forever. The spectacle of a savage catching fish from the brook with his hands, *i.e.* without capital,

*In modern times.*

has no modern counterpart. Hooks and nets, the products of past industry created by application of labor to land, have now become as essential to fishing as the fish and the man himself. Therefore, to catch fish, *i.e.* to produce wealth by creating utilities in the fish, capital is required.

This is one of a thousand ways in which the products of past industry aid man in producing wealth. Capital is an integral element in industry. Under capital are included: (1) improvements on land; (2) roads, railroads, telegraph and telephone lines; (3) tools, machines, and mechanical appliances; (4) raw materials, and partially manufactured materials to be used in later manufacturing. All these constitute wealth and all help man to produce additional wealth. Capital, therefore, may be said to be that part of wealth used to produce more wealth.

**Examples and definition of capital.**

All wealth, then, is not capital. The test of whether or not wealth is capital is the way in which it is used. If a nation or an individual has wealth and consumes it unproductively, then this wealth is not capital. The man who dissipates a fortune prevents the employment of so much wealth as capital. The Pyramids of Egypt, although representing a vast outlay of materials and labor, are not capital. Wealth used unproductively, whether by a man or by a society, is not capital.

**Wealth consumed: *Unproductively.***

Wealth may, however, be consumed productively. The wealth represented by railroads, machinery, and buildings is capital because it is being used to produce wealth. Capital, therefore, depends upon the productive use of wealth. A man with a fortune, instead of squandering it, may invest it in a business and thus convert it into capital.

***Productively.***

Every individual possessed of wealth has, therefore, two choices open to him. He may use it productively or unproductively. If through extravagant entertaining and sumptuous luxury the man uses his wealth unproductively, he has nothing to show for it except gout and indigestion. On the other hand, if by enlarging his plant and installing new machinery he uses his wealth productively, he not only keeps his original wealth but adds to it through production.

*The final consequences.*

One of the first questions that arise in a discussion of capital is the query, "Is money capital?" Money is a product of past industry and is used to assist in production. In order to prepare it for circulation, the mint, equipped with expensive capital, has expended labor in turning the bullion into its present form. Furthermore, money is an absolute necessity in productive operations. The grocer needs money to make change; the manufacturer needs it to pay his employees on Saturday night; the consumer needs it to purchase bread from the baker and milk from the dairy. In other words, money performs a very essential part in aiding modern production. If money, then, is the product of past industry and performs a part in production, it must be capital.

**Is money capital?**

*The argument.*

But these arguments do not apply to all money. If a man were to receive one hundred dollars and put them in a stocking behind the chimney, this money would not be capital because it would not be assisting in production. It is, therefore, fair to conclude that, as with other commodities, money may be capital or it may not be capital. The question as to its status at any given time may be determined only by knowing whether or not the money under consideration is being used to assist in production.

This statement represents the older view of capital, according to which things assisting in production, whether directly or indirectly, were included in capital. According to the newer view, in order to be capital a good must aid directly in production. The ax used by a woodman to cut down a tree is capital because it is the product of past industry and is being used directly to assist in future production. On the other hand, the breakfast eaten by the woodman assists production only indirectly and therefore is not capital. Economists are accepting the latter view more and more, so that money in order to be capital must assist directly in productive operations, — that is, it must be used by the grocer to make change or by the employer to pay wages.

*The newer point of view.*

As ordinarily used, the term " capital " refers to a more or less unchangeable thing. A business may be capitalized at fifty thousand dollars for twenty years. During this time, however, every tool and machine used in the work may have been replaced by new ones. The " capital " has remained the same, but the " capital goods " — the various elements making up the capital — have been worn out and replaced. In this fact lies an important distinction. Capital is the intangible, continuous thing which represents the total value of the wealth-producing products of past industry employed in the production of new wealth. Capital goods, on the other hand, represent the individual machines, engines, and other tools of production which wear out in the course of time and are replaced. Capital is a constant factor. Capital goods are constantly changing.

**Capital and " capital goods."**

**Origin of Capital.** — Even within comparatively recent times society possessed only a little wealth, nearly all of

which was needed for present consumption. In such times, therefore, capital could be accumulated only by saving; that is, instead of consuming all that he received, a man abstained from consumption and consumed but a small amount of what he would otherwise have used up. When he had saved sufficient wealth through this abstinence, he used it to secure some new tool, such as a windmill or a sailboat, that would increase his power to produce wealth.

**Capital results from saving:** *How men first saved.*

As a result of this early necessity for saving, the idea was spread through the whole race, by means of the schools, the churches, and other means of instruction, that it was necessary to save. The consequence of this education was the development of a strong desire to save. To-day this attitude is perhaps best illustrated by the immigrant who, coming to the United States, lives on a low standard in order that he may have a competence for his old age.

*How the habit spread.*

Saving has thus become one of the virtues, yet few who save really understand the connection between saving and capital. A child receives a five-dollar gold piece from its grandmother and takes it home in great glee. Acting on the advice of its parents, the child puts the gold piece in the savings bank with the implicit belief that the same five-dollar gold piece will be returned by the bank whenever the demand is made upon it. But the bank is not doing business in this way.

*How savings are capitalized.*

The bank acts as a loan agent. For example, a prospective shoe manufacturer wishes to start business, and the bank, upon being furnished proper security, lends him fifty thousand dollars. The child's five-dollar gold piece, together with hundreds of similar deposits, goes to make up

this loan. With the money or credit thus secured the manufacturer begins work. He builds his factory, employs labor, and enters the shoe market, using his wealth to produce more wealth. At the end of a year he has done such a successful business that he has made fifteen per cent on his original investment. Out of this fifteen per cent he pays the bank six per cent for the use of its money or credit, and out of this six per cent the bank pays the child three per cent or fifteen cents for the use of his five dollars. In this way, every one engaged in this capitalistic transaction has been the gainer.

Formerly this was the most general method of capitalizing savings. The bank acted as a loan agent for any one who wished to secure money and who could furnish reliable securities as collateral. Its loanable funds were secured from a large number of people in the community, each of whom wished to invest a small amount of money, but no one of whom was sufficiently well off to be able to lend a large sum such as a manufacturer would require.

There were, to be sure, cases of individuals who had saved considerable sums; and when Farmer Williams wished to build a barn, he went to Farmer Jones and borrowed five hundred dollars on a mortgage. But this was an uncertain way of carrying on an enterprise. Every community did not have a Farmer Jones. Besides, as industry grew, neither five hundred dollars nor five thousand dollars was enough to start a business. Even though he had them, no person wished to lend the large sums necessary to begin a modern business enterprise.

To meet this contingency a new plan has recently been developed and perfected. As a result of this new method the bank is often eliminated from the transaction. The

shoe manufacturer decides to begin business, but, instead of going to the bank with his collateral and borrowing fifty thousand dollars, he incorporates his business; that is, he secures a charter, a board of directors is appointed, and stocks and bonds are issued. These stocks and bonds are then sold to the people in the community who wish to invest their money and who do not wish to engage in business themselves. Thus, without the intervention of the bank and with the bank's profit eliminated, the business man secures his capital directly from the person who has saved it and who desires to invest it. At the same time, no one is called on to invest a large amount. A company may be capitalized for ten million dollars, but an individual, by buying merely one share, needs to invest only fifty or one hundred dollars in the enterprise.

Trust companies, insurance companies, and, in a limited sense, building loan associations likewise exercise the functions of the bank and act as loan agents for investors and borrowers; but in recent years the corporation, by selling stocks and bonds and paying good rates of interest, has often done away with the intermediary banking establishments and gone directly to the individual saver.

When wealth is scarce and living precarious, man must scrape and save in order to put something aside for the future. But the problem of capital may be looked at from another standpoint. To-day, when wealth is plentiful, man's ability to accumulate capital may depend not so much on saving as on efficiency. For example, a man earning ten dollars a week and desiring to become a capitalist has two courses open to him. He may lower his standard of living and, by consuming less than he requires, save two dollars of his weekly wages. Or,

**Capital may result from efficiency.**

by hard work and additional training, he may increase his efficiency so that he now has an earning capacity of twelve dollars a week. This extra two dollars will then form a fund for investment.

**Kinds of Capital.** — We have yet to examine the different kinds of capital and the problems arising from them. Capital is described as "circulating" or "fixed" and as "specialized" or "free." Circulating capital is capital which is destroyed by a single use; such as coal, and other raw materials. In contrast to this, fixed capital is capital which can be used for a considerable length of time without being destroyed. Examples of fixed capital are locomotives, factories, and dump carts.

*Circulating and fixed capital.*

Again, capital which is molded into a form which can be used only for a particular purpose is called specialized capital. The degree of specialization may be great or moderate. For example, a press which will stamp out twenty-dollar gold pieces is an extreme form of specialization because there are but a few places in the world where twenty-dollar gold pieces are stamped. A crane built to carry fifty tons is a less specialized form of capital. The crane may be of service in any one of several industries, while the coin press can be used in but one.

*Specialized capital.*

In contrast to this, capital is said to be free when it exists in a form that may be used in a large number of industries. For example, pig iron is free capital. It can be converted into carriage springs, bicycle pedals, drills, car wheels, and hundreds of other things. The ordinary machinist's lathe is somewhat specialized, but it would be considered almost free in contrast with a lathe made to turn a ten-thousand-pound shaft. When capital is usable in

*Free capital.*

only a few ways, it is specialized; when, on the other hand, it is usable in many ways, it is free.

One of the great problems in the development of capital is to determine how much capital should be utilized in the form of fixed and how much in the form of circulating capital. Wealth in the form of fixed capital cannot of course be converted immediately into circulating capital, and the progress of the community may thus be seriously hampered by the lack of a sufficient amount of circulating capital. In the early part of the nineteenth century an enormous amount of wealth was converted into canals, — a form of fixed specialized capital. Many more canals were built than the traffic warranted, and the wealth sunk in many of the canal projects was completely lost. Similarly, one of the causes of the panic of 1873 was the conversion of a large amount of the wealth of the community into fixed capital in the form of railroads. As it turned out, too great a proportion of the country's wealth was put into this form of capital and a business tie-up resulted.

**Danger:** *From too much fixed capital.*

In the same way, if too large a proportion of capital is turned into specialized goods, it is clear that industry will suffer because of a lack of capital which can be diverted into the kinds of production that will meet the changing demands of modern society. The mobility of capital in the United States, that is, its ability to change from one use to another, is shown by the growth of the automobile industry. In 1900 this industry was insignificant. In 1908, it was employing a capital of $250,000,000 and a labor force of eighty thousand employees. So long as capital is sufficiently mobile to flow readily from one industry to another, or so long as there is sufficient

*From too much specialized capital.*

wealth to form capital for new industries, the industrial conditions in the community are sound.

*From mismanagement of capital.*

Since modern production is so intimately connected with the maintenance of capital, the question of its management is of vital importance. Capital is brought together in a corporate form by a great aggregation of small investments. If, therefore, this capital is managed, not in the interest of stockholders, but in the interest of officers of corporations, the whole community will be in danger, because the loss due to mismanagement will fall on the rank and file of industry as well as upon the stockholders. The welfare of the United States is intimately dependent upon wisdom and integrity in the management of capital.

## TOPICS FOR CLASS DISCUSSION

1. Is the lead pencil with which you take notes capital?
2. Is a child's slate capital?
3. Why do we put our money into railroads rather than into pyramids?
4. Is money capital?
5. Distinguish accurately between natural resources and capital.
6. Distinguish between wealth and capital.
7. Make a list of things which are capital.
8. Are the following capital: pig iron, a plow, candy on the shelves of a retail dealer, a package of tobacco belonging to a laborer, coal?
9. Does capital really produce? How?
10. Name some employment, if you can, in which labor produces without capital.
11. Are securities capital?
12. Why do Americans look contemptuously upon immigrants who maintain a low standard of living in order to save?
13. What prompts the average man to save?

14. Is it better for a man to maintain a high standard of living or to save by lowering his standard?

15. Is the spender or the saver more advantageous to the community?

16. Is it wise to increase the amount of capital in the United States?

17. Is the effective desire of accumulation stronger in the United States or in Central America? Why?

18. Distinguish between saving and hoarding.

19. Is the miser or the spendthrift the more useful member of society?

20. Speaking of the Galveston flood, a writer said: "Fortunately, such events are not unmixed evils. Employment will now be found for many laborers, and this benefit should not be forgotten or minimized by us." What do you think of the statement?

21. Is a football celebration which results in the breaking of $200 worth of windows advantageous to laborers in general?

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# CHAPTER XVI

## The Social Surplus

I. Character and causes of the social surplus
   1. Its meaning
   2. Its causes:
      *a.* Coöperation:
         (1) How methods have changed
         (2) How men coöperate
      *b.* Growth of population
      *c.* Advance of civilization

II. Effects of the social surplus
   1. On goods and prices
   2. On education
   3. On leisure
   4. On recreation
   5. On city life
   6. On saving:
      *a.* How the viewpoint has changed
      *b.* How capital is now created
      *c.* Final effect of the social surplus

**Character and Causes of the Social Surplus.** — Intimately connected with the subject of capital is the problem of the social surplus. In fact, the social surplus is one form of capital. Just as man by individual effort may produce a surplus of goods over and above what he requires for daily life, so society through coöperation may produce a vast surplus of goods beyond what is needed for present consumption. This surplus of products, the result

**Its meaning.**

of social rather than individual action, is called the social surplus.

The individual surplus and the social surplus resemble one another in that both are intended for future use; they differ, however, in their origin. **Its causes:**

In the first place the social surplus is the result of coöperation. Men working together can produce vastly more than men working singly. An example of this may be seen in the production of any ordinary commodity, such as nails. Formerly, each nail was hammered out on an anvil by the strong arm of an artisan; now, a long wire runs into one end of a machine and comes out of the other in the form of a finished nail. This change in method has had a marvelous effect on the output. Fifty years ago one man might hammer out a hundred nails an hour; to-day, by changing the method of production, a swift-moving machine produces thousands of nails in the same time. *Coöperation.*

This change in method is based on coöperation. Men have worked together in groups and then these groups themselves have worked together. One set of men made iron ore into steel; another set made iron and steel into the nail-making machine; another made the belts, the screws, and the gears; still another transported these products to one central place, the factory; and now, all being ready and a million hands having assisted in bringing the steel wire and the machine together, the machine produces a flood of nails which find their way into the home, the office, and the factory. All this has been accomplished simply because of the principle of coöperation, which asserts that two men working together can produce more than twice as much as each man working separately.

In the second place, the social surplus results from an in-

crease in value brought about by social action in the form of the growth of population. This is clearly seen in the case of land values. The value of land rises with the growth of population and the consequent demand for land and its products. The lot in the heart of a populous city, or the fertile farm feeding a growing population, is many times more valuable to-day than fifty years ago. This increase in value has been brought about, not by any one individual, but by collective action of the whole social group. Therefore, increased land values, not due to individual improvements but resulting from social activity, are social values and constitute a part of the social surplus. While, under our present system, they may enrich individual landowners, they are, nevertheless, created by society.

*Growth of population.*

In the third place, the social surplus is due to advancing civilization. No invention is the work of one man, but the final triumph of a long line of preceding inventions. Processes, systems of work, railroads, streets, — in fact the whole fabric of society, — are begun by one generation and handed on to the next. Thus each succeeding generation enjoys the benefit of all that has gone before. Adding its own contribution to this heritage, it then passes the fabric on to its successor. In this manner the present generation, securing vast returns from a system to which it contributed nothing, is enjoying a social surplus.

*Advance of civilization.*

**Effects of the Social Surplus.** — The most direct effect of the social surplus should be seen in the quality, quantity, and prices of goods. If the surplus is properly distributed throughout society, a better grade of goods will be produced in larger quantities at cheaper prices. For example, an improved process of making shoes will increase the output and lower the prices of shoes to the

**On goods and prices.**

advantage of all who wear them. This process of bettering quality, increasing amount. and decreasing price should continue until every member of the community has an opportunity to secure enough economic goods to maintain an "efficiency" standard of living.

The social surplus also makes itself felt in other less direct ways. For example, when there is a great mass of social wealth in a community, society may offer opportunities for individual improvement. In our large cities this is frequently seen in the great number of publicly or privately endowed lecture halls. libraries, museums, schools. and colleges, which open to the average man and woman lines of work hitherto unattainable. On education.

Likewise, the social surplus makes possible wide opportunities for leisure and recreation. In modern life leisure is essential. Leisure does not mean idleness, but time in which men are free to do as they desire. The nail machine has its advantage in increased output; its disadvantage, in monotony and sameness. Since his work is largely mechanical, the man who tends this machine learns very little. Therefore, if such a man is to live a full rounded life, he must have leisure, — free time in which to walk and read and think. On leisure.

Through the shorter working day, the social surplus makes leisure possible. Surplus wealth results in surplus time. Part of this time should be devoted to recreation, — to activities of a relaxing nature which require neither concentrated thought nor monotonous movement. In the country, recreation is easily had; but in the city, opportunities for recreation, unless created in the form of parks and playgrounds, are extremely limited. Therefore, the social surplus should provide the community On recreation.

with opportunities which will prove adequate substitutes for the lost recreation facilities of country and village life.

Thus it is evident that the social surplus should have a decided effect upon the conditions of city life. This wealth of society should be diverted into various channels. Not only should recreation facilities be provided, but the city should be made beautiful. In this respect, America has much to learn from Europe. Public architecture should be of the finest character. Streets should be widened, trees planted, and every effort made to beautify the city.

**On city life.**

Finally, the social surplus will have a marked effect upon the habit of saving. It may readily be seen that the existence of large surplus wealth decreases the necessity of individual saving. In fact, so great is this surplus to-day that this increased wealth has caused the emphasis in modern life to be shifted from saving to efficiency.

**On saving:** *How viewpoint has changed.*

In earlier days, when wealth was scarce, the hard-fisted man was in great demand because it was only through stinting and close living that capital was amassed. But now wealth is so plentiful that it is no longer necessary that man should abstain from consuming. In fact, the more man consumes wisely, the greater will be his productive power. Under modern conditions, capital is created, not by learning how to save, but by learning how to produce efficiently. High efficiency means great social surplus; the worker, not the saver, produces this surplus.

*How capital is now created.*

Yet the habit of saving has become almost a racial characteristic. Through insurance and trust companies, through building and loan associations, and through investments in

stocks and bonds. people are saving as never before. This is regarded as necessary in order to provide for a "rainy day." This provision for the future may be made as a result of abstinence or in consequence of increased efficiency. If it results from the former, the individual is depriving himself of many goods needed to maintain his productive power; if it results from the latter, he is not depriving himself of the necessaries of life, but is accumulating capital by means of his increased productive capacity. The social surplus, by removing the necessity of saving, will cause men to realize more and more that efficiency, not parsimony, is the key to individual as well as social welfare.

*Final effect of the social surplus.*

## TOPICS FOR CLASS DISCUSSION

1. What is "social surplus"?
2. What are "socially created values"?
3. What relation exists between coöperation and the social surplus?
4. What factors lead men to coöperate?
5. What may the social surplus mean to the individual? To society?
6. What is the relation between population growth and the social surplus?
7. How may the social surplus affect prices? Production?
8. What relation does the social surplus bear to education? Leisure? Recreation?
9. What was the old concept of saving?
10. How is this concept altered by the presence of a large social surplus?

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# CHAPTER XVII

## American Agriculture

I. Its early development
   1. In the North
   2. In the South:
      *a.* The agricultural conditions
      *b.* The effect of the cotton gin
   3. In the West:
      *a.* Effect of steam engine
      *b.* Effect of public land policy
   4. Importance of machinery:
      *a.* Early agricultural methods
      *b.* Modern improvements
   5. The final result

II. Its present status
   1. Importance of agriculture
   2. Kinds of agriculture:
      *a.* General farming
      *b.* Production of cereals
      *c.* Stock raising
      *d.* Dairying
      *e.* Fruit growing
      *f.* Market gardening
   3. Agricultural training

If a nation is rich in land and capital and has an efficient labor force, national prosperity and individual welfare are attainable. So far as these primary requisites are concerned, the United States is unusually fortunate. What use has the United States made of these opportunities? What progress has been made in agriculture, in manufacturing, and in transportation?

**Early Development of Agriculture.** — In a previous chapter the fundamental physical differences between the North and the South were indicated. The Northern environment, with its thin soil, mineral deposits, and cold climate, made an industrial society inevitable. The Northern colonists turned naturally to lumbering, fishing, commerce, and later to mining and manufacturing. To be sure, agriculture was also developed, furnishing the colonists with grain, live stock, fruit, and general farm products. **In the North.**

The South, however, was the natural home of agriculture. Its genial climate and fertile soil led the early colonists to disregard their industrial possibilities and turn their attention to the cultivation of tobacco, rice, indigo, and cotton. The institution of slavery also fostered this agricultural development, and, in turn, was made profitable by it. While slave labor, because of its lack of intelligence, was not particularly suited to the growing of tobacco, it was nevertheless well adapted to the cultivation of rice, because in the rice swamps slave labor could be readily worked in gangs. **In the South:** *The agricultural conditions.*

In the cultivation of cotton, however, slavery received its real impetus. In 1793 Whitney's cotton gin made possible a mechanical separation of the cotton seed from the fiber. This device brought about the growth and manufacture of cotton on a large scale. Cotton cloth ceased to be expensive because the gin cleaned as much cotton in a day as had been cleaned formerly by hundreds of slaves. In this manner, cotton became the most profitable crop of the Southern planter because it could be grown by slaves managed on the gang system. The planters increased the size of their plantations, added to the number of their slaves, and extended the cultivation *Effect of the cotton-gin.*

of the cotton crop from Cape Hatteras to Texas. The South had crowned her king.

Meanwhile, a parallel agricultural movement was progressing in the West. From the opening of the Northwest Territory to the settlement of Washington and Oregon, the land west of the Alleghany Mountains was transformed from a wilderness into an agricultural region. In the early part of the nineteenth century, because of the impossibility of transporting grain other than by boat, settlements could be made only along the rivers. But, with the advent of the steam engine, land transportation of bulky freight became possible and the West was peopled and developed with lightning rapidity.

**In the West:** *Effect of steam engine.*

Another important factor in the development of the West was the ease with which public lands were secured. The federal government, abandoning the attempt to amass revenue from the sale of these lands, made every effort to induce their settlement and cultivation. As a result of this policy, the pioneers pushed from the Northwest Territory into "Louisiana," "Oregon," "California" and "Texas." They cleared the wilderness, sold their claims, and then moved on to the next bit of wild land. In this way, the great acquisitions of territory were brought, one by one, under human control and made an integral part of the agricultural wealth of the nation.

*Effect of public land policy.*

No factor has been of greater importance in the general development of American agriculture than the use of machinery. At the beginning of the nineteenth century, the farming of the nation was done with tools little better than those used by the Romans in the days of Julius Caesar. Horses were scarce; oxen, expensive. The land was broken

**Importance of machinery:** *Early agricultural methods.*

up, and crops sown, cultivated, and harvested chiefly by hand power. But this kind of labor was slow and costly, and Yankee ingenuity was called upon to devise labor-saving appliances. As a result, machinery, for the first time in human history, came to play a leading rôle in the development of agriculture.

The first successful agricultural machinery in America was built during the second quarter of the nineteenth century. Since that time it has been improved and perfected. The land is now plowed by a horse plow or steam plow; the grain is sown by a drill which not only spreads the fertilizer but covers the seed; the crop is cultivated and the harvest reaped by machines especially designed for the work. The country boy need no longer leave the back-breaking farm toil for the stifling air of the factory. The factory, in the form of modern machinery, has come to the farm and makes bearable the life of the agricultural laborer. *Modern improvements.*

Based on science and bulwarked by mechanical appliances, American agriculture has developed rapidly during the nineteenth century. The South raises cotton, tobacco, rice, sugar, fruit, and vegetables; the West, grain, fruit, and cattle; while the East is devoted to general farming and dairying products. In two hundred years American agriculture has grown from infancy to splendid maturity. **The final result.**

**Present Status of Agriculture.** — In the year 1909 the report of the Secretary of Agriculture showed that the total farm crops of the country were valued at $8,760,000,000. No other products compare with these in value; while, likewise, there is no other single group of industries including such a large proportion of workers. **Its importance.**

The dependence of labor on agriculture is seen by the fact that one third of all the labor employed in gainful occupations in the United States is engaged in some form of agricultural pursuit.

**Kinds of agriculture:**

For convenience of discussion this occupation may be divided into the following lines of work: (1) general farming; (2) production of cereals; (3) stock raising; (4) dairying; (5) fruit growing; (6) market gardening. Each of these will be briefly examined.

*General farming.*

General farming is an occupation usually associated with the word "farmer." The general farmer raises live stock, has a small dairy, keeps chickens and pigs, raises some fruit, and, if near a market, grows a small amount of garden produce. As "jack of all trades and master of none," he fails to secure a large or valuable product. For this reason the general farm is being rapidly abandoned in favor of some more specialized agricultural work.

*Production of cereals.*

Of these specialized agricultural pursuits, the production of cereals is by far the most important. The enormous value of our cereal crops may be seen by the fact that, in 1909, the total value of the 4,700,000,000 bushels of cereals produced was almost three billion dollars, which were distributed among the various crops as follows: —

| | Value | Bushels |
|---|---|---|
| Corn | $ 1,720,000,000 | 2,767,000,000 |
| Wheat | 725,000,000 | 725,000,000 |
| Oats | 400,000,000 | 984,000,000 |
| Barley | 88,000,000 | 165,000,000 |
| Rye | 23,000,000 | 31,000,000 |

Stock raising is an industry largely confined to the middle Southwest. Cattle are raised on the ranches of Arizona, transported to Kansas, and there fattened on the corn lands. Then they are taken to St. Louis, Omaha, or Chicago, where they are slaughtered, converted into various packing house products, and shipped finally to all parts of the world. On the Kansas farms, hogs also are fed with the cattle, fattened on the corn, and then shipped to the packing houses.

*Stock raising.*

Dairying, which sometimes accompanies stock raising, is usually confined to the neighborhood of great cities. The necessity of producing dairying products within easy reach of the city is particularly seen in the case of milk, since milk cannot be transported properly for a greater distance than one hundred miles. Butter, however, is transported from the Middle West to all parts of the country.

*Dairying.*

Western fruit growing was originally developed to furnish return freight for the emptied refrigerator cars. The great packing houses in the Middle West, shipping their products in cars to the Pacific Coast, were unable at first to secure for them any suitable return cargo. However, this coast was peculiarly suited to the growing of showy fruit. Thus an industry was soon developed which provided the empty meat cars with a splendidly paying return shipment. Then, too, apples and Tokay grapes proved to be good paying crops and were rapidly introduced from Oregon and Southern California. Fruit has, of course, always been grown on a small scale in all agricultural districts.

*Fruit growing.*

Market gardening has developed at a phenomenal rate during the past quarter century. Originally, farmers grew

their products and hauled them in wagons to the near-by towns. Now, spinach, lettuce, tomatoes, and other green vegetables are grown in the Southern states all winter long and shipped by fast freight to the North. These products not only bring reasonable prices to Southern farmers, but they provide city consumers with green vegetables throughout the whole year. Meanwhile, hot-houses have been constructed in the North in which lettuce, tomatoes, cucumbers, beans, and other green products are grown with considerable profit. The rapid increase of city population has thus been followed by the development, all along the Atlantic seaboard, of market gardening on a large scale.

*Market gardening.*

During the nineteenth century the American people have developed and perfected so many new agricultural methods that agriculture itself has been placed on the basis of modern industry. In bringing about this result, the agricultural school has played an important part. Formerly, the farmer was an untrained man. The knowledge he possessed was inadequate and traditional. To-day, however, on the farms of the middle and far West there are from fifteen to twenty thousand college graduates. These men are trained in the modern science which has revolutionized agriculture as well as industry, and are equipped with a knowledge of business methods. Upon men of this character depends our future agricultural progress.

**Agricultural training.**

## TOPICS FOR CLASS DISCUSSION

1. What causes make it possible for the percentage of our population engaged in agriculture to decrease steadily?

2. Why have many people left the farms for other pursuits? Is this migration likely to continue?

3. Agricultural experts tell us that by using present amounts of labor, land, and capital according to the most effective plans of agricultural organization already known, the productive efficiency in this industry could be doubled in a year. Why is this not done? What forces are making in that direction?

4. Why should the forces of custom, habit, and inertia be stronger in agriculture than in other pursuits?

5. What functions do you think the agricultural colleges perform?

6. When good means of transportation opened up markets for the produce of the Western pioneers, what changes took place in agricultural organization?

7. Under what conditions are we apt to have diversified farming? Single crop farming?

8. Why is agriculture in Europe more intensive than in the United States?

9. If you were compelled to take up agriculture as a profession, what branch would you select? Why?

10. Why is the general farmer turning more of his attention to specialties?

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## CHAPTER XVIII

### Soil Fertility

I. How the soil is exhausted
   1. Importance of fertility
   2. Causes of soil exhaustion.
      *a.* The " one crop " system.
         (1) Examples in the South
         (2) Evil results
      *b.* Removal of " humus ":
         (1) What humus is
         (2) Why it is essential
      *c.* Waste of manure:
         (1) Examples of this waste
         (2) The estimated loss

II. How fertility may be restored
   1. What fertility depends upon
   2. Means of soil conservation:
      *a.* The fertilizers:
         (1) Chemical fertilizers
         (2) Animal products
         (3) Barnyard manure
      *b.* Cover crops:
         (1) Their meaning
         (2) When and how grown
         (3) Their purpose
         (4) Value of " legumes "
   3. The outlook

**How the Soil is Exhausted.**— Inseparably connected with the subject of agriculture is the question of soil fertility. It is self-evident that without fertility soil will not produce. But in spite of this obvious proposition, little attention

has been given, until recently, to the conservation of soil fertility in the United States. In this country rich soil has been so abundant that man, rather than spend time and effort upon the conservation of a particular soil, has simply moved from land of diminishing fertility to virgin land.

**Importance of fertility.**

The problem of soil fertility deserves careful consideration. Through carelessness or ignorance, the American farmer has unnecessarily exhausted the fertility of the soil. This exhaustion has resulted chiefly from the " one crop " system, from the removal of " humus," and from the waste of manure.

**Causes of soil exhaustion:**

The one crop system used for years in the South is disastrous to soil fertility. There, the same piece of land, year after year, was used for growing tobacco or cotton, and when the planter began to notice a decreased return, he moved to another fertile spot which he likewise devoted to the exclusive production of one crop. This one crop system has two evil results. In the first place, it causes the soil to be exhausted of that particular element required to grow the special crop, so that eventually the cultivation of the crop on that land will have to be abandoned. In the second place, the particular insect enemies and bacteria which prey upon that crop will multiply to an alarming extent and ultimately prove disastrous to its cultivation.

*The " one crop " system.*

Again, soil exhaustion has resulted from the removal of " humus." Humus is decayed vegetable matter. It is essential to fertility because it loosens the soil, permits the entrance of air and sunlight, holds moisture, and finally furnishes food elements for plant growth. The exhaustion of humus makes soil infertile.

*Removal of " humus."*

Another reason for soil exhaustion is found in the waste or disuse of manure. Sometimes when manure piles become so large as to be in the way a farmer simply removes his barn, the thought of using the manure as fertilizer never entering his head. In the "abandoned farms" of New England, however, we find a less extreme but, unfortunately, more general instance of the failure to utilize manure properly. For generations, the New England farmer planted his crops, — hay and grain, — cut them, fed part of them to his cattle and horses, and shipped the remainder to town. The part which he fed to his stock was returned to the land in the form of stable manure. But this manure, while piled up in the barnyard for several months of the year, was depleted of its liquid portion and of that portion which leached out. Thus the farmer each year returned to the soil less than he had taken from it.

*Waste of manure.*

Some idea of the loss entailed by this waste may be gained from an estimate made by the United States Department of Agriculture. This department estimated that $250,000,000 represented the annual loss resulting from the failure to utilize manure efficiently. This loss might be prevented simply by conducting the liquid to cement pits on cement floors, instead of permitting it to run off into the barnyard.

In these various ways, therefore, American farmers for many years past have been exhausting the fertility of the soil, — rapidly in the Southern plantations, slowly in the New England farms. To-day, as evidence of this, great stretches of land in both districts lie unused.

**How Fertility may be Restored.** — In addition to scientific cultivation and proper maintenance of humus, soil fertility depends chiefly upon the presence of three elements,

— nitrogen, phosphorus, and potassium. Of these three elements, potassium, which is found generally in clay soils, is most easily obtained. Nitrogen is secured chiefly through ammonium compounds, while phosphorus exists in bone meal, dried blood, guano, and phosphate rock. The maintenance of soil conservation depends largely upon the presence of these elements.

**What fertility depends on.**

To maintain these essentials in the soil either chemical fertilizers, animal substances, or barnyard manure may be applied; or finally, green crops may be plowed under to act as fertilizer. By these different means, soil fertility may be conserved.

**Means of soil conservation:**

Chemical fertilizers, such as nitrate of soda, muriate of potash, and acid phosphate, furnish no humus and provide chemical elements only. On the other hand, fertilizers which are animal products, like ground fish, bone meal, and dried blood, do contain organic matter which decays in the soil. Of especial value, however, are stable manure and green crops used as fertilizers. These possess not only chemical elements, but are particularly valuable for their humus. While stable manure is very effective, its high price may prevent its use from becoming general. On the other hand, green or cover crops are cheap and equally effective.

*The fertilizers.*

A cover crop, or a green manure crop, is a crop sown with the avowed purpose of plowing it under when it reaches the proper stage. The farmer sows this crop in the late fall and lets it cover the ground all winter because he knows that something is bound to grow on his land during the late fall and early spring. He prefers to have a crop which he may use for purposes of fertilization, rather than a mass of weeds which will stand in the way of

*Cover crops.*

cultivation. Then too, in midsummer, when he ceases to cultivate corn, the wise farmer, rather than let weeds get a start, plants a cover crop between the rows of corn. These crops not only protect the ground from the fierce rays of the sun and thus help it to hold moisture, but they also develop a good growth of stalks and leaves that will prove invaluable as green manure when they are plowed down and left to rot.

Of these cover crops the most valuable are "legumes" (peas, beans, clover, vetch, rape, and alfalfa), on the roots of which appear small bulbous formations containing ammonium compounds from which nitrogen is derived. These nodules are the product of bacteria which turn air nitrogen into soil nitrogen. Through few other plants can the free nitrogen of the air be converted into nitrogen that may be utilized by plants themselves. Thus, these legumes not only furnish splendid stalks and leaf growths for humus, but in addition fix that most expensive of the fertility elements, nitrogen.

From this discussion it may be seen that in America the problem of soil fertility is not difficult of solution. While it is true that many sections of the country, through ignorance or carelessness, have suffered the effects of soil exhaustion, it is equally true that these same regions, by wise care and management, may be restored to their former fertility. It is likewise evident that there is no necessity whatsoever for the soil enjoying present fertility to be exhausted of its fertile qualities. Wise care, good judgment, and increased knowledge are the factors essential to a successful solution of the problem. The agricultural school to-day attempts to supply the farming population with this increased knowledge.

**The outlook.**

## TOPICS FOR CLASS DISCUSSION

1. What is "soil exhaustion?"
2. What does it involve?
3. Can you name any sections where the one crop system is still extensively employed?
4. What method does nature provide for the maintenance of humus in the soil?
5. How have men thwarted nature's means of humus conservation?
6. By what methods can manure be more effectively used?
7. Upon what elements does soil fertility depend?
8. Describe a piece of land and explain how you would restore its fertility.
9. What are "cover crops"?
10. What advantages are derived from their use?
11. Explain the value of legumes to the farmer.

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# CHAPTER XIX

## The Production of New Species

I. The process of selection
   1. Artificial selection:
      *a.* Its meaning
      *b.* An example
      *c.* How accomplished
   2. Natural selection:
      *a.* Its meaning
      *b.* An example
      *c.* The final result

II. How man utilizes selection
   1. In changing animal life:
      *a.* The transformed hog
      *b.* Different types of horses
      *c.* The modern hen:
         (1) The change effected
         (2) The advantage
   2. In changing vegetable life:
      *a.* The new variety of wheat
      *b.* New varieties of corn
      *c.* New fruits and vegetables
   3. The conclusion

Another problem connected with agriculture is that furnished by the conscious production of new forms of plant and animal life. Formerly, such a change in the natural order would have been regarded as evidence of witchcraft, and the person possessed of such power promptly burned

at the stake. To-day, however, this is rightly regarded as one of the triumphs of modern agriculture.

**The Process of Selection.** — Selection is either artificial or natural. Artificial selection is the process by which men perpetuate or destroy certain desirable or undesirable characteristics in animals and plants. For example, the cat, belonging to one of the most ferocious families in the animal kingdom, was originally fierce and wild. To-day, it is so gentle and quiet that it loves to be played with and caressed. It has, indeed, become the plaything of children.

**Artificial selection: *Meaning and example.***

How has this wonderful transformation been accomplished? Simply by a process of artificial selection. For centuries, man has not permitted any but the gentlest cats to live. In this manner, the quiet and docile cats, generation after generation, transmitted their gentle characteristics to their kittens, until to-day we have the domestic pet at our fireside. By a similar process other domestic animals were transformed from wild into tame creatures. Man selected in the parents those qualities he desired in the offspring. and thus determined the character of the coming generation.

***How accomplished.***

In natural selection man plays no part. Natural conditions determine those that are to survive, and their qualities are thus transmitted to their offspring. For example, in the wilds of India. ferocity is essential to the cat family. Survival depends on this quality. Hence. the ferocious tiger survives, while the less ferocious is easily killed or starves to death. In this manner a rigorous process of natural selection destroys the gentle and perpetuates the fierce qualities required in the tiger.

**Natural selection: *Meaning and example.***

By the process of natural selection, those forms of life best able to escape enemies in their particular locality adapt themselves to it, and survive. But thousands of others, not so well adapted to their environment, are killed in their struggle for existence. A good-sized cod lays from thirty to fifty millions of eggs, but only a few of those that are hatched ever survive to adult life. The remainder are destroyed by the cod's enemies either before or after hatching. Thus, in the course of centuries, this " survival of the fittest " produces a creature adapted to its own environment.

*The final result.*

Natural and artificial selection differ in one fundamental respect. The former is unconscious; the latter, conscious and deliberate. Natural selection occurs unknowingly, without the intervention of any conscious will, while artificial selection takes place with a deliberate end in view. The cod's young are accidentally destroyed by their enemies searching for food, without the thought of developing a strong type of codfish. On the other hand, the fierce, wild cats are deliberately killed by man in order to produce a quiet, gentle type of cat.

**How Man utilizes Selection.** — Through artificial selection men have changed and are still changing various forms of life coming within their power. This may be seen both in the animal and vegetable world. Southdown sheep and the two-minute trotter are products of artificial selection as much as the thornless cactus and the Burbank potato.

Artificial selection has revolutionized animal life. A striking instance of this is seen in the transformation of the hog. The wild mountain hog, with his sharp back, raw-boned body, and long legs, was little suited to the pork market. The hog breeder,

**In animal life:** *The transformed hog.*

therefore, proceeded to change this scrawny, razorback creature into a fat, edible animal. This he did by selecting from each generation the short-legged, fat, quiet hogs to be the parents of the next generation. In this manner, after the process had continued many years, a type of hog satisfying all the requirements of the market was produced.

So with horses this same process of selection has been carried on. Some horses must be fast, others suited to light work, and still others capable of drawing the heaviest loads. In response to these demands, horse breeders have finally developed fast race horses, all-around work horses, and draught horses of great bulk and strength. *Different types of horses.*

Chickens have likewise been transformed. The hen, in her wild state, laid a few eggs a year and hatched them all. The modern hen — the product of careful artificial selection — lays ten times as many eggs in the course of a year and may even be induced to refrain from setting. The value of this increased egg supply is obvious. The cost of keeping the chickens remaining the same, the additional eggs furnish the farmer with increased profits. *The modern hen.*

Recently, however, the most remarkable results from artificial selection have been attained in the development of vegetable rather than of animal species. Students of plant life, during the later nineteenth century, have created many new vegetable types. **In vegetable life:**

Consider, for example, the work of the government experiment stations in developing a new variety of cereal capable of resisting disease. The gravest foes of the farmer during late years have been blight, scale, and similar forms of plant disease. An attempt was therefore made to develop

a species of wheat that would not succumb to blight. Experiment after experiment was made with this end in view, and men were sent all over the world to look for kinds of wheat that would resist blight. Such a type of wheat was evolved. At the same time, settlements were being made on the dry lands of the West, where the rainfall is only one third of that along the Atlantic plains. Here, the land being fertile and the water scarce, a kind of wheat capable of resisting drought was produced. Eventually, by careful selection, there was further developed a variety of wheat not only requiring little moisture, but also comparatively free from blight.

*The new variety of wheat.*

The corn belt in the Middle West furnishes another interesting example of the results of selection. The manufacturers of corn oil desired a corn containing a high percentage of oil, while the manufacturers of certain corn food found a low percentage of oil desirable. To meet these different demands, experiments were made on a certain variety of corn containing six per cent of oil. As a result, this same corn in the course of a few years was made to produce one variety containing nine per cent of oil, and another containing two per cent of oil.

*New varieties of corn.*

Through the same means the splendid market tomato is grown from a weed; the luscious Baldwin is the descendant of the thorn apple; grains are produced with qualities hitherto unknown; and Burbank promises in the future a seedless strawberry.

*New fruits and vegetables.*

Artificial selection has proved one of the most potent forces at the disposal of the agriculturist. Through it he has been enabled to revolutionize his industry and to place upon the market multitudes of

**The conclusion.**

new products. In industrial life, through the domestication of animals and the gradual development of beasts of burden, artificial selection has exercised an equally potent influence.

## TOPICS FOR CLASS DISCUSSION

1. What is selection?
2. Can you cite any local instances of the selective process?
3. Distinguish between natural and artificial selection.
4. What is the purpose of artificial selection?
5. Name some of the important contributions of artificial selection to agriculture; to civilization.
6. How does the modern farmer utilize selection?
7. Explain the transformation of wild into domestic animals.
8. What may selection accomplish in the vegetable world?

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## CHAPTER XX

### American Industry

I. Early American industry
   1. Kinds of industries
   2. The colonial policy:
      *a.* Its meaning
      *b.* How applied by England
      *c.* How carried out:
         (1) By restrictions on machinery
         (2) By regulating commerce
         (3) By restricting manufacturing
      *d.* Effects of this policy
   3. Condition after the war:
      *a.* The new danger
      *b.* The proposed remedy

II. Later character of American industry
   1. Inventions:
      *a.* Their importance
      *b.* Their effects:
         (1) On mechanical power
         (2) On transportation facilities
         (3) On labor-saving devices
   2. The "factory system":
      *a.* Its essential features
      *b.* Its advantages:
         (1) In production
         (2) In consumption
      *c.* Its disadvantages

Another field which has developed rapidly in the past few decades is that of industry. Not only in agriculture, but

also in manufacturing, has America realized her latent possibilities.

**Early American Industry.** — The American colonists had open to them three kinds of industries. In the first place, they might engage in the primary industries, such as fishing, hunting, lumbering, mining, and quarrying, — all of which are concerned in converting natural resources into economic goods. In the next place, they might engage in the secondary industries, which work on the raw or semi-finished product, such, for example, as shipbuilding, iron or textile manufacturing, and the manufacture of woolen goods, hats, clothing, and similar articles. Finally the American colonists might engage in another form of industrial activity, — commerce. The harbor facilities, the proximity of the West Indian markets, together with the development of manufacturing and of agriculture, afforded every opportunity for an easy exchange of commodities.

**Kinds of industries.**

Had the colonists been content to engage only in the primary industries, involving the production of raw material, no clash with England might have occurred. According to the general colonial policy of the seventeenth century, colonies existed for the good of the mother country. It was their function to supply raw materials for the home country to manufacture and sell back to them. England attempted to apply this theory by requiring the colonies to produce only raw materials, by transporting these raw products in her own ships to be manufactured at home, and by carrying back in her own vessels the finished products to be sold in America. In this way, the English manufacturer and merchant made several intermediary profits.

**The colonial policy:** *Meaning and application.*

To carry out this policy effectively, England resorted to many devices. Since manufacturing involved the use of machinery, the home government passed acts prohibiting the exportation of machinery to the colonies. But, despite this discouragement, the colonists journeyed to the English factories, imported some labor, brought in an occasional drawing or pattern, and, above all, proceeded to invent their own implements. In this manner, colonial industry and commerce grew apace and evoked the wrath of the mother country.

*How carried out.*

To accomplish its end, Parliament also passed, during the middle of the seventeenth century, the Navigation Acts, regulating and restricting commerce. Under these acts, the monopoly of English trade was to be held by English ships and English subjects. As the colonists began ship-building at an early date, these acts struck a hard blow at a rising American industry and a growing American commerce. Then, again, these Navigation Acts enumerated certain articles to be exported from the colonies to Great Britain only. Later on, other acts were passed, all of which were intended to limit and restrict colonial commerce.

In addition, England discouraged American industry by passing acts forbidding the colonies to manufacture certain goods produced in England. This prohibition was particularly severe on the New England colonies, where every effort had been made to encourage industry. The Woolen Act of 1699 prohibited the exportation of woolen goods from any colony to a foreign country or from one colony to another. Later on, similar restrictions were placed on other industries.

The colonists petitioned, threatened, and resorted to every possible means to circumvent the law; while the English

were equally insistent and determined to carry out their policy. The Northern colonies suffered most severely from the effects of this narrow policy, because it denied the inhabitants of this region their logical occupations, — shipbuilding, manufacturing, and commerce. Therefore, from an economic standpoint, the situation was critical and the war inevitable. *Effects of this policy.*

While the Revolutionary War was in progress, national industry was really beginning. The English blockade, following the declaration of war and continuing throughout the struggle, forced the colonists themselves to manufacture. But when peace was declared, American industry faced a new peril. For years, European manufacturers had been stocking up goods. When the war was over, these goods flooded the American market. Handicapped as the American manufacturers were by crude machinery and high-paid labor, they were unable to compete with their foreign rivals. **Condition after the war:** *The new danger.*

To meet this situation, the American manufacturer naturally turned to some form of legislative protection. This was first afforded by the Tariff Act of 1789. Soon after, Alexander Hamilton, Secretary of the Treasury, made a strong plea for protection in his famous report on the status of manufactures. In this report, he took the position that " customs duties " must be levied if the " infant industries " of America were to compete successfully with the established industries of Europe. As a result of his recommendation, the rates in the Tariff Act of 1789 were increased in 1790, and again in 1792. In this manner was inaugurated that policy of protecting American manufactures, which, with slight interruptions, has continued to the present day. *The remedy sought.*

**Later Character of American Industry.** — At the close of the eighteenth century, whatever industries existed in America were conducted along simple lines. To-day, industry is highly organized and industrial methods are extremely complicated.

Without the inventions of the last one hundred and fifty years, men would still be working singly and inefficiently.

**Inventions: *Their importance.*** Modern industry is founded on inventions. Through them machinery has come to the aid of man who has learned that, by working coöperatively with the help of machinery, industrial miracles can be accomplished. Steam and electric power are slaves, willing and eager to do the work of man. Inventions are the means whereby man has directed this mechanical power.

The effect of inventions may be seen chiefly in three directions. In the first place, through inventions, mechanical

***Their effects.*** power has been utilized to direct industry. Man's physical strength is infinitesimal. Mechanical power is therefore brought in to make the "wheels go around."

Inventions have, in the second place, revolutionized the means of transportation. As soon as men discovered that the wheels of industry could be driven more cheaply and efficiently by mechanical power than by human energy, they applied this knowledge to improving their transportation facilities. The increased supply of economic goods could thus be transported cheaply between distant places. The development of the railway, the telephone, the telegraph, the trolley car, and the commercial automobile have all contributed vastly to industrial development.

Inventions have finally exercised a wonderful influence on labor. The Yankee is noted for doing nothing by hand that

may be done more quickly or cheaply by machinery. As a result, more labor-saving devices have been invented in the United States than in any other country. Examples of such machinery are found everywhere. In lifting and carrying heavy masses of iron and lumber, great cranes now do the work once done by human muscles. The old hand press of Benjamin Franklin's time has been replaced by the huge printing machines of the present day. By the invention of labor-saving machinery, the Yankee has caused his head to save his hands.

The logical outcome of these new conditions brought about by inventions was the factory system of industry. It has already been pointed out that during colonial times American industrial methods and processes were simple and easily performed. The home was the seat of industry. Here was done the work of spinning, weaving, and cloth making. Because industry was confined to the home, this method of manufacture was called the " domestic system " of industry. However, with the advent of the new inventions of the latter half of the eighteenth century, industry required entirely new conditions. Complicated machinery could not be installed in the home; it must be separately housed in the factory. Things were thus no longer hand-made and home-made, but machine-made and factory-made. Labor, too, instead of consisting of a small family group was now made up of great groups in large factories. In this manner, the nineteenth century witnessed the development of the " factory system " of industry.

**The " factory system ": *Its essential features.***

The advantages of this system are seen primarily in the production of wealth. The great quantities of goods produced by the factory make possible a decrease in the

cost of manufacture, well illustrated by the following table prepared by the United States Department of Labor. The table refers to the manufacture of one hundred pairs of " men's medium-grade calf, welt, lace shoes, single soles, soft box toes " : —

*Its advantages.*

| | 1863 | 1895 |
|---|---|---|
| Different operations performed | 73 | 173 |
| Different workmen employed | 1 | 371 |
| Time of work — Hours | 1831 | 234 |
| Time of work — Minutes | 40 | 36.3 |
| Labor cost | $457.91 | $59.54 |

The first column represents conditions under the domestic system of industry; the second, under the factory system. The number of persons working on the shoes has increased from one to three hundred and seventy-one, yet at the same time the total labor cost has decreased to almost one eighth of its former amount. With this reduction in the labor cost there has, however, been a great increase in the cost of tools and machinery.

From the standpoint of consumption the advantages of the factory system are no less evident. Things which were formerly produced in the home with great care and expense are now cheaply supplied by the factory. Hosiery firms in one week turn out ten thousand dozen pairs of stockings; the factory deluges the housekeeper with manufactured breakfast foods and canned fruit. Because the factory does all this more cheaply than the home, man's consumption has become more varied.

The factory system of industry has some disadvantages

also. These were felt chiefly at the outset, when large numbers of skilled laborers were forced out of work by the introduction of machinery. However, after an adjustment to the new conditions had been effected, this evil was in part removed. A more present evil is found in the fact that individuals, living and working under the factory system, are subjected to the harmful conditions imposed by that system. In this connection attention has already been called to the evils of child labor, to the danger from unguarded machinery, from dust, high temperature, and lack of ventilation. Then, too, the massing of laborers in large cities near factories presents a serious problem. But after all, these conditions are transitory and may in the course of time be remedied.

*Its disadvantages.*

## TOPICS FOR CLASS DISCUSSION

1. In what industrial qualities did the early colonists differ from the Indians?

2. Why did the colonists wish to develop secondary industries?

3. What important influence did the division of industries — agriculture in the Southern, and manufacture and commerce in the Northern colonies — have upon the later history of the United States?

4. Was the English colonial policy ultimately beneficial to England? To the colonies?

5. What parallel may be drawn between the English colonial policy of 1700 and the American colonial policy of 1900?

6. Were the colonists justified in objecting to the British restrictions on their commerce and manufacture?

7. Had the American manufacturers no alternative, in 1789, but to ask for a protective tariff?

8. Was Hamilton correct in assuming that a nation should be self-supporting through the production of all the necessaries of life?

9. What factors made possible the rapid advance of American manufactures after 1815?

10. What advantage had the American over the European manufacturer?

11. What is the importance of inventions to society?

12. Where do the benefits of inventions go?

13. What is the most effectual way of encouraging inventors?

14. What are the leading causes of the development of the factory system?

15. What are the chief evils of the factory system?

16. Can the evils of the factory system be separated from it? If so, how?

17. Was the factory system inevitable?

18. Are there any ways in which the factory system can be superseded?

19. Has the increased amount of goods produced under the factory system made up for the loss individually which has been the lot of many?

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# CHAPTER XXI

## Large Scale Production

I. Its nature
   1. What it means
   2. The former method
   3. The present method:
      *a*. An illustration
      *b*. Its essential features
      *c*. How it has spread

II. Its advantages
   1. Decreased cost of production
   2. Control of the product
   3. Utilization of by-products:
      *a*. Its meaning
      *b*. Some examples
   4. Specialization in industry

III. Its disadvantages and consequences
   1. The disadvantages
   2. The consequences:
      *a*. On labor
      *b*. On capital
   3. The conclusion

**Nature of Large Scale Production.** — The logical outcome of the factory system is the system of large scale production; that is, production which is carried on with such a high degree of organization and with such a great mass of capital that the producers, in order to facilitate and cheapen operations, are able to utilize the most modern methods and appliances and to employ the most efficient labor.

What it means.

Consider, for example, in the iron industry, the difference between the methods employed twenty-five years ago and those used to-day. When iron ore was discovered in the Lake Superior region after the iron industry had been centered at Pittsburg, the manufacturers of iron wished to transport the ore to the coal district. To accomplish this, steamboats were employed to carry the ore down the Lakes to a point near Pittsburg; and then the ore was taken from the boats by means of hand tools, such as shovels and wheel barrows. This simple method of performing the work was known as small scale production.

**The former method.**

In contrast to this, to-day, we have the methods of large scale production. The ore, dug from the ore fields with steam shovels, is hauled to the lakeside and emptied on a high wharf. From this wharf the iron ore is dropped through shutes into the hold of an ore ship which then proceeds to the lower Lake ports. Here special electrical machinery operates huge grab-buckets, which drop into the hold of the ship, grab from six to ten tons of ore at once, and transfer it to the cars waiting to convey it to Pittsburg. By means of these grab buckets, ten thousand tons of ore can be transferred from the vessel to the cars in a few hours. In all these processes it will be observed that muscular energy has been replaced by mechanical appliances.

**The present method:** *An illustration.*

But these appliances are not secured for nothing. The unloading plant itself costs a quarter million dollars, — a sum greater than that represented by the entire plant of the small scale producer. Thus, large scale production necessitates not only the most modern methods and machinery, but also vast sums of capital centralized in a few hands.

*Its essential features.*

The development of large scale production in the United States during the last quarter of the nineteenth century has been phenomenal. By no manner of means has this method been confined to the iron and steel industries. On the contrary, it has spread to the production of oil, of sugar, of tobacco, of bread products, of electrical appliances, of locomotives, and indeed of practically all the leading industries of the country. *How it has spread.*

**Advantages of Large Scale Production.** — Many advantages are derived from this system of production. It is obvious at the outset that new methods and appliances cheapen the cost of production. On this point, however, sufficient has been said in connection with the factory system. But large scale production decreases cost of production, not only through the use of improved machinery, but also through the control of raw materials and the utilization of by-products. **Decreased cost of production.**

In the first place, this system of industry aims to place in the same hands the control of the product from the time it is raw material until it has been converted into a finished or semi-finished product. This fact may be well illustrated by the development of the Carnegie Steel Company. Mr. Carnegie, who controlled a small steel mill, wished to own also the raw materials, — ore and coke, — as well as the means of transporting them to his works. He therefore proceeded to secure control, successively, of the Frick Company's coal and coke; of extensive ore fields in the Lake region; and, finally, of certain transportation lines running into Pittsburg. In this manner, the Carnegie Steel Company secured control of steel from the ore bed to the finished rail. **Control of the product.**

Another striking advantage of large scale production is

found in its utilization of by-products. By-products are the waste of industry, which by special processes are converted into economic goods. In the packing houses of the West, for example, bones are made into many useful articles; fats provide glycerine for the preparation of soap and toilet articles; and the gray matter of calves' brains is turned into medicine for the treatment of nervous diseases. Through the aid of by-product utilization, the great Western packer is thus able to maintain his business against local competition.

**Utilization of by-products: *Its meaning.***

Other industries effect similar savings. Slag, or waste from iron furnaces, is now made into high-class brick. "Buckwheat" and "dust" coal were formerly thrown away as refuse after the larger sizes had been screened out. To-day, however, this coal is utilized in the production of steam. Perhaps the best-known utilization of by-products has come with the development of the cotton seed oil industry. In 1860, cotton seed was garbage; in 1870, fertilizer; in 1880, cattle food; and in 1890, table food. Such striking transformations make us wonder what the future may bring forth.

***Some examples.***

Still another great advantage resulting from large scale production is found in specialization in industry. Although large scale production has brought a large number of plants under one management, this centralization is resulting in each plant's specializing in the manufacture of some particular product. For example, in manufacturing blacksmiths' supplies, one factory makes horseshoes; another, horseshoe nails; a third, drills; and a fourth, bolts and nuts. In this manner industry is being constantly specialized; and, of course, along with this de-

**Specialization in industry.**

velopment, highly specialized skill and minute subdivision of labor have resulted.

**Some Disadvantages and Consequences.** — Large scale production may also have its disadvantages. An enormous amount of capital, concentrated in the hands of a few individuals, gives a small group of men extraordinary power. This power may be used for ill as well as for good. For example, it may be used to secure "special privilege," — a corrupt alliance between government and business. Or, this power may be deliberately used to crush competing men and companies. Likewise, the benefits resulting from the decreased cost of production may be enjoyed, not by the community in the form of lower prices and higher wages, but by the great capitalists in the form of higher prices and lower wages.

**The disadvantages.**

Some other consequences, which may or may not be disadvantageous, result from the system of large scale production. In the first place, men do not produce finished goods. This result was, of course, first brought about by the division of labor, but the great specialization of large scale production has rendered this all the more inevitable. Formerly a man made a shoe, or a hat, or a coat. To-day he performs but one operation required in the productive process. For example, a man may simply polish the oil cups of locomotives, which are eventually used to haul food across the continent for his table. He no longer produces food, but directs his labor toward the performance of one simple operation. This change has resulted in labor's being highly specialized and organized in the form of a great industrial army.

**The consequences:** *On labor.*

On the other hand, the effects of this system of large scale production have been felt perhaps even more in the organiza-

tion and management of capital. The old, simple methods of doing business are rapidly disappearing. Formerly a man with a small amount of capital engaged in business independently; to-day he becomes one of a thousand all engaged in a common business. The single-handed capitalist has been replaced by the huge coöperative corporation, which may be managed for the benefit or the detriment of the community.

*On capital.*

In these various ways the modern system of large scale production has resulted in momentous consequences. While some of these are disadvantageous, they are generally transitory and remediable. Those that are advantageous, however, are permanent and increasing.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. Outline the chief factors which have made large scale production possible.
2. What effects have inventions had on large scale production?
3. Discuss the chief advantages of large scale production.
4. Are these advantages an integral part of, or are they merely incidental to, large scale production?
5. Could modern society exist without large scale production?
6. Discuss the economic effects on China of introducing a system of large scale production.
7. Discuss the importance of by-products to modern industry.
8. What has been the chief cause of the utilization of by-products?
9. What is the relation between large scale production and the use of by-products?
10. Does the saving through by-products benefit the consumer?
11. Are the advantages derived by the public from large scale production more numerous than the disadvantages?
12. Is it likely that large factories will ever be devoted to portrait painting? Give reasons.

13. For which of the following articles is large scale production appropriate: hand-made shoes; machine-made shoes; furniture; nails; cut glass; orchids; millinery?

14. Do you understand that all business is destined to become large scale business?

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# CHAPTER XXII

## Business Organization

I. The earlier forms
   1. The " entrepreneur "
   2. The partnership:
      *a.* Its nature
      *b.* Its advantages
      *c.* Its disadvantages

II. The later forms
   1. The corporation:
      *a.* Its nature
      *b.* Its advantages:
         (1) Great capital
         (2) Limited liability
         (3) Good management
   2. The trust:
      *a.* Its nature
      *b.* Its different forms:
         (1) The " pool "
         (2) The board of trustees
         (3) The holding company
      *c.* Its federal regulation:
         (1) Why necessary
         (2) The Sherman Anti-Trust Act
         (3) Influence of the Supreme Court
         (4) The outlook

The industrial revolution, from the domestic system to large scale production, is reflected, in the world of business management, in the change from the single employer to the great trust. These later forms of business organization are more easily understood after a study of the earlier forms.

**The Earlier Forms.** — At first, business was conducted simply by one individual. To-day, this method is still pursued by the single business man who launches out for himself. Because he undertakes the full responsibilities of the business, he is called an "entrepreneur" or enterpriser. The term "entrepreneur" is equally applicable to the peanut vender, to the corner grocer, or to the head of a great factory. An entrepreneur is simply one who "runs" his own business, — assuming the risks, receiving the profits, and bearing the losses.

*The "entrepreneur."*

Under the partnership form of business organization two or more men go into business together. The single entrepreneur is replaced by two, three, or four men who jointly conduct the business and share its gains and losses.

*The partnership:*

This method of doing business has a double advantage. In the first place, the capital is increased; and, secondly, the work is more efficiently performed by each partner's specializing in some particular direction. However, the partnership has two serious disadvantages. The first of these lies in the fact that each partner is responsible, up to the value of his personal possessions, for all debts contracted by the other partners in pursuance of the business. A further disadvantage of the partnership is the limited amount of capital it controls. Although the amount is usually considerably greater than that which a single business man commands, yet it falls so far short of the needs of modern times that other forms of business organizations were devised.

*Its advantages and disadvantages.*

**The Later Forms.** — To meet the necessities of large scale production the business corporation came into exist-

ence. A corporation may be defined as "an association of individuals, known as stockholders, who are empowered by legal charter to elect annually a board of directors, and through it to act as one person in the conduct of the specified business." The corporation is thus a legal entity, existing only in the eyes of the law. Although it is an artificial creature, it possesses many attributes of natural persons. For example, it has power to sue and to be sued; to hold, purchase, and convey real and personal estates; to appoint officers and agents; and above all, it is empowered "to have succession, by its corporate name, for the period limited in its charter, and when no period is limited, perpetually." This last feature of perpetual existence is extremely valuable to the corporation because dependence upon the life of an individual entrepreneur or partner creates a most undesirable instability.

**The corporation:** *Its nature.*

Aside from its permanent character, the corporation, as a form of business organization, possesses other advantages. Chief among these is its ability to amass a great sum of capital. Thousands of individuals, through their purchase of stock in the corporation, contribute millions to its capital.

*Its advantages.*

This ability of the corporation to raise capital depends largely upon the principle of limited liability. According to this principle, stockholders are liable for the debts of the company only to an amount equal to the par value of the stock. If the business fails, therefore, a single stockholder can lose only the value of his stock. The only exception to this general rule is in the case of national banks, where the liability is double the amount of the par value of the stock subscribed.

The corporation also possesses advantages from the stand-

point of the management of its business. This form of business organization secures flexibility. Through the simple process of a stockholders' election a complete change in the management may be effected. Likewise, through the offer of high salaries the corporation is able to secure the services of efficient men far beyond the reach of smaller concerns. Finally, the economies of large scale production made possible by the resources of the corporation constitute perhaps the greatest advantage of this form of business organization.

Just as the partnership was superseded by the corporation, so the single corporation has been superseded in many fields of activity by a still larger unit of management, the trust. The trust, like the corporation, is a form of business organization devised to meet a definite economic need. It may be said to have passed through three stages of development.

**The trust: *Its nature.***

The first form the trust assumed is popularly known as the "pool." In this form, independent producers in any one line make agreements to eliminate competition among themselves either by restricting output or by fixing prices. The pool is so named because, under such an arrangement, the receipts of the various firms are put into a common fund or "pool" and divided among them in a proportion formerly agreed upon. Not only has this system proved weak by reason of the outbreak of mutual jealousy and distrust, but such agreements have also been declared illegal.

*Its forms.*

Therefore, the trust entered on its second stage of development. In this stage the various competing corporations turn over their stock to a central board of trustees, which hands back "trust certificates" in exchange. This board,

holding a majority of the stock of the various constituent companies, maintains complete harmony among the companies and regulates output and price. This is the "trust" in the technical sense. It has been declared illegal.

The third form of the trust, devised because the trustee "trust" was outlawed, is known as the holding company. Under the holding company plan each corporation entering the combination maintains its separate existence. To secure unity of action, a central corporation is formed, empowered to hold stock of other corporations. The stock of the parent company is then exchanged for the stock of all the various constituent corporations. This places under one central control the voting power on the stock of all combining companies, thus insuring uniformity of action and the maintenance of prices. This third stage resembles very much the second, except that a board of trustees is illegal, and a corporation empowered to hold stock of other companies may or may not be illegal.

*Its federal regulation.*

The holding company, then, is the modern form of business organization. When vast sums of capital become concentrated in a few hands, some supervision of the use to which they are put is required. The remedy, therefore, for the evils incident to trust organization lies in some form of government regulation.

At first the states attempted to regulate the trusts. In 1889 Kansas took the lead by passing a law against business corporations. In the same year she was joined by some other states; and during the first half of the following year, three more states joined the movement. These laws usually struck at all combinations regardless of whether they formed complete or only partial monopolies. They were so drastic in character that they were often declared uncon-

stitutional. Furthermore, the laws of the different states conflicted in their provisions. But above all, state action proved inadequate because of the limited power of the states. In our dual system of government, the federal government alone has power over interstate commerce; and it is chiefly in this kind of commerce that the great corporations are engaged. Not state, but federal regulation, therefore, became imperative.

In 1890 the demand for federal action was so general and insistent that Congress passed the Sherman Anti-Trust Act. According to this act " every contract, combination in the form of trust or otherwise, or conspiracy in restraint of trade or commerce among the several states, or with foreign nations " is declared illegal. The terms of this act are so sweeping that they have been applied not only to industrial combinations, but also to railroads and labor organizations. In fact, the language of this act is so inclusive that there has been much doubt concerning its exact meaning.

The decisions of the United States Supreme Court in 1910 in the Standard Oil case and later in the tobacco case have, however, somewhat clarified the situation. According to these decisions, any combination which " unreasonably " restrains trade is illegal. In commenting on this decision a recent writer says: " The purpose (of this act) was to forbid such contracts or combinations as tend to prevent . . . competition and to create a monopoly with power to fix prices, limit output, and deteriorate quality. This, therefore, is the standard by which every trade combination is to be tested. If its necessary effect is to create such a monopoly, it is illegal. If it has no such effect, it is legal. Whether in any particular case brought before the Court the combination has such effect is ' to be determined

by the light of reason guided by the principles of law, and the duty to apply and enforce the public policy embodied in the statute.' "

Thus it is possible for certain combinations to be declared illegal, and for others to exist within the law. When one form is declared illegal, another in harmony with the law will be devised. The process of evolution is at work in industry as well as in society; and large scale production is one of its products. But this does not mean that a trust organization of industry will be allowed to trample certain elemental individual rights. The ultimate test of this or of any other proposed legislation must be social welfare. Until the trusts conserve social welfare, the trust problem will be unsolved.

## TOPICS FOR CLASS DISCUSSION

1. Name the different forms of business undertaking. Discuss them from the standpoint of their relative strength and weakness.

2. Are the following entrepreneurs? a cobbler, a farmer, a consulting engineer, the boss of a section gang, a banker.

3. Name some of the duties of an entrepreneur.

4. What are the chief points of difference between a corporation and a partnership?

5. Why is the corporation an advantageous form of business organization?

6. What advantages has a corporation as compared with a partnership? Are there any respects in which a partnership has advantages not possessed by a corporation?

7. What is a holding company? What are the advantages afforded by this form of organization?

8. What is a trust?

9. Is the growth of combination in accord with economic law?

10. Is the movement toward combination still going on? Is it likely to continue in the future?

11. Are all trusts monopolies? Are all monopolies trusts?

12. What social advantages and disadvantages do you see in the trusts?

13. Is there likely to be a world corporation formed? Or a "great trust" in which every one will be a shareholder?

14. Who is the promoter? Is he responsible for the formation of trusts?

15. What are the arguments for and against full publicity?

16. On what basis is the amount of capitalization of a trust determined?

17. What are the checks on the power of monopolies to raise the prices of their products?

18. What advantages and disadvantages do you see in monopoly?

19. Would the abolition of the tariff result in the disappearance of the "trusts"?

20. Name some of the tendencies in the organization of natural resources.

21. What changes are being made in the organization of labor?

22. Name some indications of increasing government activity in business.

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## CHAPTER XXIII

### The Industrial Army

I. Development of labor coöperation
   1. The stages of coöperation:
      *a.* Simple coöperation
      *b.* Division of employments
      *c.* Division of labor
      *d.* Specialization in industry
   2. Advantages of coöperation:
      *a.* In regard to the product
      *b.* In regard to machinery

II. The army of workers
   1. The organizer:
      *a.* Policies and subordinates
      *b.* Markets and methods
   2. The manager
   3. The " boss "
   4. The wageworker:
      *a.* The skilled worker
      *b.* The semi-skilled worker
      *c.* The unskilled worker:
         (1) His characteristics
         (2) Why increasing
      *d.* The conclusion

The change in business organization brought about by large scale production has been accompanied by a similar development in the organization of labor. Formerly, industrial effort was individual and competitive; to-day, it is social and coöperative.

**Development of Labor Coöperation.** — In the days of savagery, comparatively little labor was performed. Men fought, hunted, and fished, and women took charge of the primitive industries. Gradually, however, military coöperation led to industrial coöperation. Men who had worked together to kill a bear resorted to the same method in raising a stone. Although no task was assigned to definite individuals, each man helped the other by performing a like part of the same operation. This stage in the development of labor is described as simple coöperation.

**Its stages:** *Simple coöperation.*

But simple coöperation at best is unsatisfactory. Some men like to do one thing better than another; hence the development of the second stage of labor coöperation known as the division of employments. In this stage, one man kills game, another builds boats, while the women carry on agriculture or weave cloth. Each produces a finished product, which he exchanges for the product of some one else, and thus a certain degree of interdependence runs through the whole group.

*Division of employments.*

The next step is division of labor. Formerly, in building a house one man would perform all the parts of that operation. He would go into the woods, fell the trees, and build the house. But gradually the different kinds of labor involved in the task of house building were divided among several individuals. One man would simply fell the trees; another cut them into logs; another haul the lumber to a sawmill, and another build the house itself. In this case several men coöperate, but each performs a different part of the general task.

*Division of labor.*

Finally, this simple division of labor becomes complex through what is known as specialization in industry, — the

fourth and present stage of labor coöperation. By means of this principle of specialization, the different parts of the task are themselves subdivided. For example, in the above illustration, the man who chopped down the tree — one part of the general task — was provided with an ax which was the result of the labor of hundreds of workmen, each one of whom performed some particular part in the process. In this manner, modern methods of production have resulted in minute subdivision of labor and great specialization in industry. Coöperation has made this possible.

*Specialization in industry.*

By means of this form of labor coöperation, the product is not only increased in quantity, but improved in quality. Persons who coöperate in labor learn intimately the special tasks they perform. Each one is able to do his work much more effectively, therefore, than he would be able to perform work involving a large number of separate operations. For this reason, a hundred workers in a shoe factory are able to turn out more shoes and better shoes than a hundred individual shoemakers.

**Advantages:** *Concerning the product.*

Another great advantage of this kind of coöperation is found in the fact that it makes possible the use of machinery. When an involved operation, like shoemaking, has been subdivided into forty or fifty operations, the rougher work may often be done more quickly and more cheaply by machinery than by human hands. Thus, the sewing machine, stitching through heavy leather, accomplishes a speedier and better result than the individual hand worker. In this manner, man's inventive genius develops labor-saving machinery to take the place of human energy.

*Concerning machinery.*

**The Army of Workers.** — To-day, all labor is coöperative, and the American labor force is highly organized from top to bottom in the semblance of an army.

At the head of this army of workers is the organizer, — the commander-in-chief of his particular industry. Like the military commander, his duties are to determine broad policies and to intrust their execution to competent hands. The organizer mobilizes the forces of labor and capital and applies them to natural resources in such a way that the smallest outlay produces the largest return. He leaves all details to his subordinates, for whose competency he is responsible.

**The organizer:** *Policies and subordinates.*

The organizer must also have an intimate knowledge of the markets. He must know what goods are in demand and where and when this demand is most active, that is, where prices are highest. He must likewise have a thorough knowledge of industrial processes and methods of production, so that by-products may be fully utilized and large scale production carried on efficiently.

*Markets and methods.*

Next to the organizer in this industrial army is the manager. Like the colonel of a regiment, he executes the orders and carries out the plans of his superior officer. The manager, therefore, must be in closer touch with the details of the business. While the organizer directs from his New York office the policy of a whole group of mills throughout the country, the manager is responsible for the successful management of only one of these plants. He must understand not only the labor market, but also the machinery in his particular branch of industry. It is his duty to bring these two together so that he may secure the greatest possible production.

**The manager:** *His duties.*

Below the manager is the foreman or "boss," corresponding to the captain, lieutenant, or corporal of a military organization. It is his duty to see that the men do the work that the manager has outlined. He is responsible for getting all the work possible out of the group of laborers under his charge. The "boss," therefore, requires ability to get along with his men, and to persuade them or compel them to work effectively. In the past, the Irish have made the best bosses, but Italians and Slavs are now being used to direct the work of their own countrymen.

**The "boss": His duties.**

We now come to the ordinary workers themselves, — the rank and file of this industrial army. Just as the successful execution of a general's orders depends, in the last analysis, upon the bravery and power of the great mass of soldiers, so the real test of a nation's efficiency is found in the ability and character of its great body of wageworkers.

**The wageworker:**

The wageworkers, for convenience, may be divided into three groups, — the skilled, the semi-skilled, and the unskilled. The skilled worker is one who does work that requires a longer or shorter period of training or apprenticeship. In this class are included the type-setter, the blacksmith, the carpenter, the skilled clerk and bookkeeper, and a host of others who have received more or less special training in their respective lines of work.

*The skilled worker.*

The semi-skilled worker is one doing work that may be learned with comparative ease by any newcomer who has ordinary intelligence and ability. Although it is hard to give an accurate definition of the semi-skilled wageworker, the number of men in this class is large. For example, in this group are included

*The semi-skilled worker.*

the miner, the brakeman, the motorman, the mechanic's helper, and numerous others doing work which requires some little skill and intelligence, but no particular period of apprenticeship.

The unskilled worker represents a maximum of physical force and a minimum of mental capacity. The street laborer, the coal heaver, and the ditch digger are representatives of this class. The number of laborers in this group is increasing by reason of two circumstances. In the first place, thousands of immigrants to this country, being unable to speak the English language, are forced into unskilled labor regardless of their native ability. In the second place, the rapid introduction of machinery often deprives a skilled worker of his regular labor and forces him temporarily into the lower ranks, so that he may now be obliged to attend to the machine which does his former work.

*The unskilled worker.*

Large scale production has left as deep an impress upon labor as upon capital. This twofold aspect of modern American industry presents some of the most striking problems of individual and social welfare. Through coöperation, industrial efficiency has been secured and economic progress attained. This same principle, however, must be utilized to attain individual efficiency and welfare in the rank and file of the great army of industrial workers.

*The conclusion.*

## TOPICS FOR CLASS DISCUSSION

1. What is the relation between labor coöperation and economic progress?

2. Discuss the importance of labor coöperation in securing increased production.

3. Is coöperation increasing or decreasing in extent?

4. What is the relation between labor coöperation and large scale production?

5. What is the relation between labor coöperation and specialization in industry?

6. Is modern labor coöperation voluntary?

7. Draw a diagram showing the organization of labor in modern industry.

8. What elements in the colonial situation rendered the supply of labor small?

9. What differences can be noted in the available quality of labor in the early colonies and in the United States at the present time?

10. Is the organizer necessary to modern industry?

11. What service does the organizer render?

12. Is the supply of organizing ability limited? If so, by what?

13. Is the average school in America calculated to develop organizing ability?

14. What is the most significant fact regarding the wageworker in modern life?

15. What is the relation between our school system and the wageworker?

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## CHAPTER XXIV

### TRANSPORTATION

I. Railroad transportation
   1. Its importance
   2. Its rapid growth
   3. Centralized control
   4. Nature of the railroad business:
      *a.* The railroad a monopoly:
         (1) The reasons
         (2) Consequent problems
      *b.* The railroad a "quasi public" corporation:
         (1) Receives public aid
         (2) Possesses right of "eminent domain"
      *c.* The conclusion

II. Other transportation agencies
   1. The telegraph
   2. The telephone
   3. Express companies:
      *a.* Their growth
      *b.* Their regulation:
         (1) Why necessary
         (2) What Europe has done
         (3) What the United States should do
   4. Electric traction:
      *a.* Urban transportation
      *b.* Rural transportation
      *c.* Electrification of steam roads
   5. The progress attained

Another distinct phase of American industry appears in the development of transportation facilities. Foremost among these facilities is the railroad; but growing steadily

in importance are other transportation agencies, such as the telegraph, the telephone, express companies, and electric traction. Each of these demands consideration.

**The Railroad.** — Railroad transportation has made possible the American nation. Politically, it has performed an inestimable service by bringing the diverse parts of the union within easy reach of each other. To-day, the city of Washington is nearer to San Francisco than it was, in early days, to Massachusetts. From an economic standpoint, the service rendered by the railroad has been no less profound. It has bound North and South, East and West, into a gigantic economic unit, complete and self-sustaining in all important respects. This the railroad has accomplished by giving goods "place utility"; that is, by transporting goods from one place where they are not needed to another place where they are in demand. The railroad has thus become the connecting link between the producer and the distant consumer.

**Its importance.**

The growth of railroad mileage in the United States has been phenomenal. In 1830 there were, in this country, only twenty-three miles of railroad; in 1860 there were over thirty thousand miles; in 1880, over ninety-three thousand miles; in 1900, over one hundred and ninety-three thousand miles; and in 1910, two hundred and forty thousand miles. This growth in railway facilities is without parallel in the economic history of any other people.

**Its rapid growth.**

Accompanying this increase in mileage is the movement toward centralization of railroad control. Two hundred and ten independent roads, each with its own president, in 1883, had been consolidated, by 1907, into fifty or less. This movement toward centralization has been so rapid that it is not idle to speculate on the day

**Centralized control.**

when four or five men, sitting around a table, will control all the important track mileage of the country. At present sixty per cent of the mileage of the United States is under the control of five interests.

The significance of this concentration becomes apparent only when one considers the nature of the railroad business. The railroad is essentially a monopoly; that is, it performs a service which few other agencies perform, and the cost of which decreases with the increase in the volume of business. The initial cost of constructing a railroad is great; and, therefore, from a social point of view, it is an economic waste to construct another line to duplicate the work of the first road. Moreover, after the trackage, terminal facilities, and rolling stock have once been provided, an increase in the volume of business does not mean a corresponding increase in the expense of operation. In fact, the unit expense diminishes as the business increases.

**Its nature:** *A monopoly.*

In spite of legal prohibition, railroads may use their monopoly power unfairly. For example, the law declares that railroads, in transporting commodities, shall not discriminate between individuals, but shall offer their services to all on equal terms. Nevertheless, because of the principle of diminishing expense, the traffic manager is ever tempted to accept extra business at a lower rate. This conflict between railroad profits and public interests sometimes leads to a violation of the principle of equal rates for equal service.

Another distinctive feature of the railroad is its close dependence on the government. This close relation between the railroad and the public has caused the railroad to become a " quasi public " corporation.

*A " quasi public " corporation.*

In the first place, railroads from the earliest times have received financial aid from the states. In addition to this, the national government has not only advanced money, but also contributed thousands of acres of public land. Thus railroads are especially indebted to the public and are clearly marked off from ordinary economic activities.

But of even greater significance is the railroad's right of "eminent domain." According to this right, a state, upon the payment of just compensation, may take private property for public use even against the will of the owner. To facilitate the railroad in performing its service, the state has delegated this right to the transportation company and thus endowed it with despotic power. Railroads are thus peculiarly indebted to the public, and those who manage them should regard public welfare. They are not free to charge what rates they choose, to decide what sections of the country shall prosper, or what individuals shall amass large fortunes.

Beside the importance which it derives from its quasi public nature, the railroad business is of tremendous magnitude. In 1909 the labor employed in railroading was somewhat over 1,500,000; the capital invested was $18,000,000,000; and the gross earnings amounted to $20,377,000,000. Thus in the number of laborers employed and in the amount of capital invested, railroading is, next to agriculture, the greatest single business in the United States.

*The conclusion.*

**Other Transportation Agencies.** — While the railroad is by far the most important transportation agency in the United States, there are other agencies which play a great part in promoting national efficiency. Chief among these are telegraph, telephone, and express companies, which,

together with electric traction, constitute an exceedingly important group of transportation agencies.

The telegraph developed along the lines of railway communication. With improvements in the railroad system, it became necessary to have some means of speedy communication, not only between railroad stations, but also between signal towers. Since the telegraph was the earliest means of instant communication, telegraph and railroad lines everywhere paralleled one another. **The telegraph.**

However, during the last quarter of the nineteenth century, the telegraph met a keen competitor in a new device — the telephone. Unlike the telegraph, which was immediately used for long distance communication, the telephone at first was employed only to communicate within buildings or to communicate between places within the same city. Gradually, however, the sphere of the telephone was broadened, until, to-day, a conversation between New York and Chicago is an ordinary occurrence. Despite the efforts of the telegraph companies to secure trade, through the introduction of the " night letter " and similar innovations, the telephone has largely supplanted the telegraph as a direct and effective means of short distance communication. **The telephone.**

Of quite a different character is the transportation furnished by express companies. While heavy commodities are transported by freight, small packages require a speedier, easier method of transportation. Therefore, the express business was developed in the United States. Express companies developed side by side with the early railroads, until, to-day, there are strong indications of a community of interests between them. **Express companies: *Their growth.***

At first the express business was organized locally and

conducted by a number of separate companies. To-day, however, this business, while not under one formal unified control, is nevertheless combined into one great system operated on a business understanding so effectual that territory is divided and rates agreed upon without a sign of competitive spirit. As a result of this understanding, express rates in the United States are high.

*Their regulation.*

As a means of obviating private extortion in the carriage of small packages, Europe has adopted the parcels post. For a very low charge, the government carries packages of larger size than are transported through the United States mails. Almost every civilized country in the world, except the United States, has adopted a parcels post system.

There is no doubt that the United States should follow European example; but, despite long-continued agitation, no parcels post law has yet been passed (1912). A prominent senator recently stated that the reasons for this failure were four: the American Express Company, the Adams Express Company, the Wells Fargo Express Company, and the Southern Express Company. Whether this statement be correct or not, the fact remains that the express companies have worked consistently, and, so far, effectively, against the passage of parcels post legislation.

The form of transportation which, recently, has had the most rapid growth is electric traction. While electric cars were operated during the last two decades of the nineteenth century, it was not until the close of the century that the "boom" in electric traction began. Since that time financiers have turned their attention to traction operations.

**Electric traction;**

The electric traction problem has three distinct phases, — urban transportation, rural transportation, and electrification of steam roads. The concentration of population in large cities has made the problem of urban transportation most acute. While cities have grown greatly in extent, the business center remains small. Therefore, the increased population of the outlying regions must have some means of rapid transit. With a maximum of speed and a minimum of expense in operation, the electric car offers by far the most effective means of transporting the city dweller to his place of work.

*Urban transportation.*

At the same time that street railways have been electrified and extended, inter-city and rural electric lines have been developed. As compared with steam roads, the cost of installing and operating such lines is small. Consequently, transportation facilities have been afforded to sparsely settled districts where steam transportation would have been unprofitable. Furthermore, a steam road, requiring a comparatively level bed, necessitates heavy cutting and filling. On the other hand, an electric car climbs almost any hill, and the cost of grading is thus reduced to a minimum. Hence, the rural electric line reaches many points not accessible by the steam railway. In this manner, electric traction has proved a real boon to the country dwellers.

*Rural transportation.*

The third phase of electric traction — the electrification of steam roads now in use — has as yet barely begun. The New York Central has electrified some suburban lines running out of New York City with gratifying results. Since such electrification is profitable in cases of dense suburban populations, it is more than likely that, during the next few decades, all the suburban steam

*Electrification of steam roads.*

roads running out of the larger American cities will be electrified.

The means of transportation are the arteries of American business and social life. At the opening of the nineteenth century, the American people traveled on land at the same rate that Julius Cæsar traveled centuries before. Since the Roman roads were so superior, modern traveling might even have been slower. But during this one century marvelous progress was made in the means and methods of transportation. Space and time were annihilated, distant places connected, goods and persons easily transported, and communication between distant places established.

**Progress attained.**

## TOPICS FOR CLASS DISCUSSION

1. In what sense is transportation productive?
2. Why is transportation a greater problem in the United States than in Europe?
3. How would the sudden destruction of all railroads affect the life of the American people?
4. If there were no railroads, could there be any "trusts"?
5. If one person rides on a pass, who pays for that ride?
6. How does the Pennsylvania Railroad differ from a large department store in regard to its freedom in making rates or prices?
7. What effect has the prosperity of the railroads on the steel industry?
8. Have American railroads in general followed or directed the course of settlement of the country?
9. Would private capital have been invested in railroad building, if the chance of extraordinary gain had been greater in other industries?
10. Are local famines likely to be as serious in China in the future as in the past?
11. Has railroad transportation relieved or aggravated the problem of great cities?

12. How has the American railroad benefited the Dakota farmer?

13. Can you think of any circumstances under which it would be wise for a railroad to charge less than direct cost?

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# CHAPTER XXV

## Regulation of Transportation

I. The early situation
   1. Power of Congress:
      *a.* The original clause
      *b.* Why power was granted
      *c.* How first applied
   2. Growth of railroads:
      *a.* How favored at first
      *b.* What evils crept in
      *c.* The changed attitude

II. The Interstate Commerce Act
   1. Its main provisions
   2. Powers of the Commission
   3. Why discriminations were prohibited
   4. Other results of the act
   5. The defects

III. Later legislation
   1. Act of 1903
   2. Act of 1906
   3. Act of 1910
   4. Importance of regulation

IV. Conclusions concerning production
   1. Retrogressive societies
   2. Static societies
   3. Dynamic societies

**The Early Situation.** — The Constitutional Convention of 1787 gave the national government the following power over commerce, — "Congress shall have power to regulate commerce with foreign nations, and *among* the several states, and with the Indian tribes."

**Power of Congress:**

The necessity of giving the central government some power over interstate commerce was one of the leading reasons for framing a new constitution. The conflicting interests that resulted from giving the individual states control over commerce proved conclusively, during the régime of the Articles of Confederation, that some federal regulation of commerce was absolutely necessary. Therefore, when the new constitution was drawn up, Congress was given exclusive power to regulate interstate commerce.

*Why the power was granted.*

This new power of Congress was, of course, at first applied to the regulation of water transportation between different states, since water (aside from roads) was the only general means of transporting goods and persons from place to place. But with the impetus given to railroad construction in the epoch following the Civil War, the regulation, not of water, but of land transportation became the absorbing problem.

*How first applied.*

At first, the railroad was encouraged because it proved a blessing to newly developing communities. Cities and states vied with one another in buying railroad securities, in granting immunity from taxation, and in affording every inducement for railroad construction. To these growing communities, the railroad afforded the opportunity to ship out the commodities which they produced, and to bring in the goods which they needed.

**Growth of railroads: How favored.**

This enthusiasm was, however, short-lived. The railroads developed with even greater rapidity than had been anticipated; and, with their development, came an increase in monopoly power upon which railroad enthusiasts had not counted. To be sure, the railroads had their advantages; but the extortionate rates and the discrim-

*What evils crept in.*

inations between shippers and towns more than offset the increased commercial facilities which the railroads afforded.

Consequently a storm of indignant protest was directed against railroad activities. Instead of encouragement, they now received strong condemnation. By 1870, the cry against extortionate rates was common in all parts of the country, but particularly in the agricultural states of the newly developing Middle West. Stringent state laws were passed, but since the railroads were engaged in interstate business, they well knew that attempts of individual states to regulate their activities would prove ineffectual. Some form of federal regulation therefore became imperative.

*The changed attitude.*

**The Interstate Commerce Act.** — In 1887 this situation culminated in the passage of the famous Interstate Commerce Act, which was directed at interstate passenger and freight traffic carried by railroad or by railroad and water. This Act of 1887 includes five main provisions: (1) unreasonable or extortionate rates were prohibited; (2) discriminations between persons, places, and commodities were made illegal; (3) fares and rates were to be made public, and a ten-day notice was to precede any advance, and a three-day notice any reduction, in rates; (4) the act made it unlawful for a common carrier to charge or receive a greater rate in the aggregate for transporting passengers or freight under substantially similar circumstances and conditions, for a shorter than for a longer distance, over the same line, in the same direction, the shorter being included within the longer distance; (5) pooling transactions between railroads were prohibited.

**Main provisions.**

In order to enforce this law, a Commission consisting of

five members, appointed by the President with the consent of the Senate, was created. Subsequently the number of commissioners was increased to seven and the term of office fixed at seven years. The Commission was empowered to investigate rates and alleged discriminations, and, where necessary, to bring suit before the courts. Orders issued by the commission were not binding, should the common carrier, against whom the orders were issued, choose to appeal to the courts. Where an appeal was taken, the commission and the carrier went through the regular process of suing and being sued and the decision of the court was final.

**Commission's power.**

The provision regarding unreasonable and extortionate rates was based upon the English common law against extortion. The discriminations between persons, places, and commodities had grown up with the railroad industry. By charging lower rates to one shipper than to another, the railroad determined which of the two should remain in business; by giving more favorable rates to one town than to another, the railroad determined which town should advance commercially; and by arranging the rates of two commodities, such as flour and wheat, the railroad determined whether wheat should be shipped from the wheat fields to Minneapolis and there ground into flour, or, whether it should be shipped from the wheat fields to the flour mills of the Eastern coast. In any one of these cases, the railroad was an arbiter possessed of most despotic power. Had it proved a benevolent despot, all might have been well; but, unfortunately, the use made of this power was in many cases disastrous to the parties concerned.

**Why discriminations were prohibited.**

The publication of rates required by the new law gave all

an opportunity to secure the same terms from the railroads; while the " long and short haul " clause was aimed against the abuse of granting a rate, from one city to the next city, lower than the rate between an intermediate small town and one of the cities in question. In an attempt to stimulate competition, pooling was prohibited.

**Other results.**

This last provision regarding pooling was perhaps the most impossible from an economic standpoint. Since so many restrictions had been imposed upon them, pooling seemed to be all that was left to the railroads. Being deprived of this, they were forced into combination. Another defect was the limited power given to the Interstate Commerce Commission. To remedy this, subsequent legislation was enacted. In all the subsequent acts, however, the principles underlying the original law have been generally maintained.

**The defects.**

**Later Legislation.** — In 1890, the Sherman Anti-Trust Law was passed. Judicial decisions, however, have been responsible for applying this law in certain limited respects to the railroads. The act of 1903, known as the Elkins Law, increased the effectiveness of the Commission by making a corporation as well as its agent liable to prosecution; by increasing the penalties imposed under the original Interstate Commerce Act; by permitting the Commerce Commission to secure injunctions from the United States Circuit Courts; and by directing the Attorney General to prosecute under the act. This law expedited the work of the Commission by permitting an appeal, in interstate commerce cases, to be made more directly to the Supreme Court.

**Act of 1903.**

A law passed in 1906 increased the administrative power of the Commission by permitting it to revise railway rates.

Up to that time, the Commission could only declare that a certain rate was unreasonable. Under the new law, it might state what rate was reasonable by fixing a maximum. In addition, its authority was extended to all express, sleeping car, and pipe line companies doing an interstate business. The law made further provisions which enabled the Commission to secure uniform accounting. **Act of 1906.**

In 1910 additional railroad legislation created a special Commerce Court in which railroad cases are to be decided. Frequently, considerable friction prevailed between the regular courts of justice and the Interstate Commerce Commission; and the latter body, which had no status as a court, was subject to petty annoyances and delays. The new law hopes to increase the facility with which the Interstate Commerce Commission may transact its business. **Act of 1910.**

Transportation agencies are in such a monopolistic position that they can practically determine the welfare of individuals, of communities, and of industries. Since it is undesirable that any such great power should rest uncontrolled in the hands of private individuals who are unaccountable to the public, legislation has been freely passed in the effort to regulate individual control of transportation facilities. **Importance of regulation.**

**Conclusions concerning Production.** — We have now concluded the discussion of some of the problems arising from the production of wealth. Land, labor, and capital are all necessary to production, and in so far as they are rendered efficient will the productive machinery of society be on an efficiency basis. One of three things may happen to a productive society, — it may retrograde, remain stationary, or advance.

Even while population is on the increase, the other factors in production, land and capital, may decrease. Through loss of land or through soil exhaustion, natural resources may be depleted; and capital or surplus wealth may be destroyed or wasted. As a consequence, the production of wealth gradually decreases and human wants remain largely unsatisfied. When this condition of affairs exists throughout the whole nation, society becomes retrogressive.

**Retrogressive societies.**

In the second case a society may be stationary. For centuries, perhaps, the natural method of utilizing resources and capital may have remained the same. Old customs and traditions may regulate methods of production, thus successfully preventing any forward movement. Labor efficiency is not increased, and production does not increase.

**Static societies.**

Still another possibility is open to society. A community endowed with natural resources, an efficient labor force, and an abundance of capital or surplus wealth may progress rapidly in the production of wealth and make possible an expansion of the higher wants of man. Such a dynamic civilization presents infinite possibilities for individual prosperity and social welfare. Our study of production in the United States shows conclusively the dynamic, progressive character of American civilization.

**Dynamic societies.**

## TOPICS FOR CLASS DISCUSSION

1. Why does the question of the control of the railroads in the interest of the public present especial difficulties in America?

2. Has the government built and operated railroads successfully in any country?

3. Do you think the United States government should own the railroads in this country now?

4. Who is responsible for the present large number of railroad accidents, the railroad, the public, or the employee?

5. Is federal control superior to state control of railroads?

6. What causes led to the passage of the Interstate Commerce Law?

7. What were the leading advantages of the law?

8. In what respects was the law ineffectual?

9. How have the provisions of the original Act of 1887 been strengthened by later legislation?

10. What is the value of uniform accounting?

11. What is pooling, and why was it made illegal?

12. Would all rates be reasonable and just if made on the basis of distance only?

13. Should the Interstate Commerce Commission have power to fix rates?

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# PART IV

## EXCHANGE OF WEALTH

## CHAPTER XXVI

### Value and Price

I. Value
   1. Nature of value:
      *a.* Its general meaning
      *b.* Its economic meaning:
         (1) It arises from utility
         (2) It involves scarcity
         (3) It may apply to useless things
      *c.* Forms of economic value
   2. Value in use
   3. Value in exchange:
      *a.* What it means
      *b.* How determined:
         (1) By marginal utility and social estimate
         (2) By supply and demand
         (3) An example

II. Price
   1. What price is
   2. Difference between prices and values
   3. How price is determined:
      *a.* When competition is free
      *b.* When competition is not free

Leaving now the subject of the production of wealth, we pass on to a brief consideration of some of the more important problems connected with its exchange. Wealth

would be of little value, if, after it had been produced, it were not transferred from one individual to another. It will readily be seen that the complex conditions of modern industrial life, due to separation of employments and division of labor, make it impossible for one man to produce all the economic goods that he requires for his own consumption. The process by which he secures goods from others in return for his own goods is known, in economics, as the exchange of wealth.

**Value.** — Goods would not be desired and exchanged for one another, unless they possessed value. In a popular sense, the term "value" is given a wide application. We speak of the value of an individual to a community or of the value of an educational or of a religious system to society. In this sense, the term refers to the desirable qualities in the person or institution. In this manner we think of "personal values," "educational values," and "religious values" — each one of these phrases illustrating the general meaning of the term "value" as used in everyday life.

**Its nature:** *General meaning.*

In economics, however, the term "value" has a special significance and arises primarily from the utility of economic goods. It will be remembered that "wants" are the desires which individuals have for economic goods. Utility is the want-satisfying quality of a good. Therefore any economic good possessing utility has, in consequence, economic value.

*Economic meaning.*

But not all goods are economic; some are free. Occasionally things are so plentiful that, although they have utility, they do not possess value in the economic sense. For example, water, a free gift of nature, may or may not have economic value. Frequently it has not because it is not an

economic good, — no one would give something upon which he had spent time and effort in exchange for it. But, to a man adrift on the South Pacific, the value of drinking water would be inestimable, — he would give anything in exchange for it. Thus in addition to utility, scarcity is necessary to economic value.

It has already been pointed out that utility is not synonymous with usefulness. Utility is simply the quality in an economic good which satisfies a want. Now, if an individual wants something that is not useful, this useless thing will possess utility. A diamond necklace or a quart of whisky may therefore posssess as much utility, and consequently value, as a well-furnished house or a nourishing diet. We may, therefore, conclude that economic value is the worth, without any necessary regard to the usefulness, that is attached to economic goods.

If now we stop to consider for a moment, we shall see that this worth may be estimated either by the individual for his own special use, or by the whole group for purposes of exchange. This difference in the methods of estimating the worth of economic goods gives rise to two forms of economic value: value in use and value in exchange.

*Forms of value.*

Value in use is purely subjective; that is, it is simply an individual estimate of the worth of a given commodity. One individual may value the utility of a certain economic good far more highly than would another individual. In this determination of value, personal peculiarities play a large part. For example, a silver spoon that has become an heirloom may satisfy such an intense want in an individual that he will value it far beyond its intrinsic worth. This individual valuation of the spoon is

**Value in use.**

clearly not a measure of its general or social value. While this is an exaggerated case, nevertheless, it is perfectly true that individual valuations cannot be just estimates of values put upon goods by society as a whole. Therefore, economics is concerned primarily with the second kind of value, — value in exchange.

Value in exchange is a social valuation placed upon an economic good by a number of persons. Of course, a good must have value in use before it can have value in exchange. But, in determining value in exchange, the good is looked upon, not from the standpoint of its utility to a single individual, but from the point of view of its worth to a whole group of people. Thus, value in exchange is the social estimate of the general worth of an economic good and represents the " power of a good to command other goods in exchange for itself."

**Value in exchange:** *Meaning.*

In determining this exchange value of a commodity, its utility naturally plays an important part. But utility, itself, is variable. In discussing this subject under the head of consumption, we saw that to the tired traveler the utility of the first apple is much greater than the utility of the third apple; and that, in consuming apples, he soon reaches a stage where the utility is so low that he desires no more. This lowest utility of the apple is called its marginal utility, and it is upon this marginal utility that value in exchange depends, because no one will give more for apples than an amount representing the satisfaction which he expects to derive from the last apple which he consumes. Furthermore, it is not the marginal utility of a commodity to a single individual that determines its exchange value; but it is its marginal utility to a whole community that is the measure of this value. Thus, ex-

*How determined.*

change value depends upon the estimate that society places on marginal utilities.

In determining exchange value there is still another point that must not be overlooked. The value of an economic good varies with the relation of supply to demand. This, however, is only another way of saying that it depends upon marginal utility, because an increase in the supply of a commodity means a decrease in its marginal utility; and this, in turn, means a fall in value. On the other hand, a decrease in the supply of a good means an increase in its marginal utility, and a corresponding rise in value. From this standpoint, therefore, the amount of economic goods (supply) contrasted with the intensity and prevalence of wants (demand) determines value in exchange.

For example, if the demand remains the same and there is an increase in the supply of turkeys, their marginal utility will decline and their exchange value fall. But if, with the approach of Christmas, the demand for turkeys increases and the supply remains stationary, the marginal utility of turkey will become greater and the exchange value higher. This relation between supply or goods, on the one hand, and demand or wants, on the other, must always be reckoned with.

**Price.** — Price is exchange value expressed in terms of money. When, for example, we wish to express the exchange value of some commodity, such as a pear, we do so in terms of some other commodity which is used as a standard of measuring all values. We do not say that the pear is worth two apples, but that the pear is worth two cents; because money, not apples, is the standard by which all economic values are measured. Money thus becomes a common denominator of value, and prices are expressed in terms of this commodity.

**What price is.**

It will be observed that we have said that money is a commodity, exactly like pears or apples. This is true, because money is merely some form of metal which is as much an economic good as oil or coal. In the United States, it represents gold. Now since gold is a commodity, it is subject to the same law of value as any other commodity. That is, if its supply increases in a greater proportion than the demand, its value will decrease correspondingly. Under these circumstances, therefore, instead of pears being worth two cents, they may now be worth three cents; and the prices of all other goods will rise similarly, because the value of gold (or money) has fallen. Conversely, if the supply of gold diminishes as compared with other goods, the prices of commodities will fall because the value of gold has risen. Consequently, a general rise or a general fall of prices is possible. On the other hand, there can be no general rise or general fall of values, because exchange value represents the purchasing power of a commodity; that is, a relation between two commodities. If, therefore, the value of one of these goods rises, the value of the other must fall. If a pear formerly exchanged for two apples, and now exchanges for three, the value of the one has increased at the expense of the other. Therefore, there can be no general rise or fall in values.

**Difference between prices and values.**

Under conditions of free competition, buyers and sellers meet on a common ground—the market place—and there determine price by deciding as to the value of commodities. The value agreed upon is the price, and it is expressed in terms of money. The price will depend upon the law of supply and demand governing value. The seller will look at the problem largely from the standpoint of production, and the buyer

**How determined:** *When competition is free.*

from the standpoint of consumption. This method of determining price is still in vogue, to-day, in backward and rural communities. In fact, even in some civilized European countries, such as Greece and Italy, "bargaining" is still resorted to as a method of determining prices. Usually, however, in large modern societies, the one price system has been adopted. That is, the seller estimates the value of the good to the community in terms of price. If his estimate is correct or nearly so, he sells the commodity; if not, he changes the price to conform to the social estimate. Thus, price represents the point at which the seller and the buyer meet in their estimate of value.

From this discussion we have seen how price would be determined normally. On the one hand, among producers there would be free competition, and, on the other, among consumers there would be wants of varying degrees of intensity; while the law of supply and demand would form the backbone of the whole process. But conditions are not always as here depicted. In fact, in modern industrial society, conditions of production are continually changing. Competition gives way to monopoly, and cost of production plays a diminishing part in determining prices. Consequently, in this absence of competition the monopolist fixes the price at a point which affords him the greatest monopoly profit.

*When competition is not free.*

## TOPICS FOR CLASS DISCUSSION

1. Does every good possess utility? Is everything which possesses utility a good?

2. Have the following utility: whisky, a gambler's pack of cards, clothes of antiquated fashion, opium, grand opera, air?

3. If wealth increases, will there be greater well-being? What is the relation of wealth to well-being?

4. Is an encyclopedia wealth? Among Indians?

5. "Whisky is not wealth. It has no permanent value for society." In what sense is the term "value" used?

6. A mercantile establishment advertises "the best values in the city." What is meant here by value?

7. Could a thing have value unless it was desired? Unless it was scarce?

8. Draw up a sentence in which value is used in the sense in which the economist uses it.

9. Would a bag of gold have value to a shipwrecked sailor on a rocky and deserted island? Would a loaf of bread?

10. What is "price"?

11. What is the importance of the idea of price to society?

12. Explain the relation between value and price.

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# CHAPTER XXVII

## Price and Monopoly

I. Monopoly power
   1. How measured
   2. How limited
   3. Size not essential

II. Kinds of monopolies
   1. Industrial monopolies:
      *a*. Created by law:
         (1) Through control of natural resources
         (2) Through patents and copyrights
      *b*. Created by organization
      *c*. Created by both
   2. Franchise monopolies:
      *a*. Transportation:
         (1) Railroads
         (2) Electric traction
      *b*. Power and light
   3. Labor monopolies:
      *a*. Personal monopoly
      *b*. Organization monopoly
   4. Public monopolies
   5. Conclusion

**Monopoly Power.** — At present, monopoly is one of the chief elements in fixing price. Popularly, the term "monopoly" is applied to any large industrial organization. But from an economic standpoint, an organization is a monopoly only when, through crushing competition and controlling output, it is in a position to

**How measured.**

raise prices above a competitive level. In other words, a monopoly is an organization with the power to fix price above a competitive level. The only real measure of the existence of monopoly is its price-fixing power.

Observe that while price-fixing capacity is the test of monopoly, it does not necessarily follow that the monopoly can fix any price that it chooses. For example, if a company had a monopoly of iron ore and fixed the price at a prohibitive figure, industry would substitute cement for iron to such an extent that either the price would not be maintained, or, if it were maintained, the product would remain unsold. Thus the power of the consumer to substitute one commodity for another limits the power of monopoly to fix any price it might desire. **How limited.**

This power to fix price which determines monopoly may relate to the production of a commodity on a very large scale or on a very small scale. For example, the old Standard Oil Company unquestionably had monopoly power since it had the power to fix the price of petroleum and petroleum products above a competitive level. The same thing is true to-day of the manufacturers of plate glass and of the manufacturers of print paper. These businesses are very large and the products in which they deal are widely used and of great value. On the other hand, a manufacturing company may be engaged in the production of articles that are used by only a few people, and its possibilities of growth may thus be extremely limited. This is the case, for example, with the manufacturers of psychological instruments. But even here, there is monopoly power. In fact, the demand for these instruments is so small that those who make them charge for them prices which are out of all proportion to their cost of production. **Size not essential.**

In the case of glass and paper, the monopoly power is exercised to a limited degree; in the case of psychological appliances, the monopoly power is very great, and the monopoly price far exceeds the competitive one.

**Kinds of Monopolies.** — Monopolies may be divided into four groups: (1) industrial monopolies, (2) franchise monopolies, (3) labor monopolies, and (4) public monopolies.

**Industrial monopolies:** Industrial monopolies may be subdivided into three classes, — those created by law, those created by organization, and those created by both law and organization.

Industrial monopolies are created primarily by law. They base their monopoly power on the control of natural resources, and this control is made possible only through existing forms of property law. Thus, the control of natural resources, sanctioned by law, is characteristic of most industrial monopolies. The development of modern industry has taught the manufacturer that his highest effectiveness can be maintained only when he has control of all the processes of production, from the raw material in the earth to the finished product ready for shipment. Such a monopoly control of resources is the most effective method of preventing competition because the supply of natural resources is limited and the demand for them is increasing. The International Harvester Company, which controls the forests from which it cuts the timber and the mines from which it digs the iron and coal for the manufacture of its machinery, is typical of a great group of integrated industries. Through natural resource monopoly, the great industrial corporations are enabled to fix monopoly prices.

*Created by law.*

Patents and copyrights constitute the second element in

maintaining industrial monopolies created by law. Although less permanent than the monopoly of natural resources, patents and copyrights, while they exist, are more absolute. While there are natural resources of many kinds in different parts of the country, a patent once secured gives to the owner sole right for many years to manufacture that particular article. The same thing holds true of copyrights, trade-marks, patented processes, and the like. The bread formulas of the great baking companies, the cigar labels and trade-marks of the cigar manufacturers, the patented processes for making paint and other similar products, are all illustrations of a monopoly power based upon this form of legal control.

*Created by organization.*

On the other hand, organization may be the primary factor in developing an industrial monopoly. The American Ice Company, for example, is dealing in a product which may be secured almost anywhere in the northern part of the United States; yet it is able, in certain cities, to charge a monopoly price because it controls the machinery of ice delivery in those places. In the same way, largely through the control of the retail tobacco business, the American Tobacco Company was enabled for many years to secure monopoly prices.

*Created by both.*

In most of the industrial monopolies, however, both law and organization play a part. The United States Steel Corporation depends upon its natural resources, upon its formulas, and upon its effective business organization. The same thing is true of the International Rubber Company, and of a number of other large American business organizations which have been able to keep their prices above a competitive level.

The second form of monopoly, a monopoly through fran-

chise, is absolute. If the franchise is perpetual, the monopoly is likewise perpetual. Even though provisions are made in franchises to limit the prices which shall be charged for services, monopoly power still exists because the corporation may fix the price above a competitive level. This kind of monopoly usually grants the privilege of furnishing transportation, power, or light.

**Franchise monopolies:**

The greatest form of franchise monopoly is the railroad. Enough has been said to show that railroads are essentially monopolies, and to show that, because of their right of eminent domain and their control over the district through which they pass, they are enabled to fix monopoly prices, — exacting "all that the traffic will bear." There is perhaps no better illustration in the country of the fixing of monopoly price than that furnished by the railroad industry. No book is published on the subject of railroad transportation which does not emphasize the thought that the predominant factor affecting the price of railroad transportation, in the absence of some form of competition, is the price that people are willing to pay.

*Transportation.*

Suburban electric trolley lines are assuming a position of greater importance in the group of franchise monopolies. Therefore, as interurban transportation develops, the franchises secured by the present interurban companies will give them almost as great monopoly power as that now possessed by the railroads. It is in cities, however, that the franchise monopoly of transportation assumes very great importance. Trolley lines, subways, and 'bus companies possess great monopoly power. For example, in a city of one million and a half, the competitive cost of transportation perhaps does not exceed two and one half cents per passenger, yet the actual price paid by the passenger is usually

from four to five cents. This difference between the price paid and the competitive price represents the extent of the monopoly power.

The other leading form of municipal franchise monopoly — the monopoly over power and light — is chiefly seen in the control of electricity and gas. Water power is being gradually converted into electric power, which is transported sometimes as far as two hundred and fifty miles. The present widespread use of coal prevents the power companies from exercising their real monopoly power, but in the course of the next century the diminution of the coal supply will increase the monopoly of the holders of water power franchises. Light, too, is often furnished through franchise monopolies. They carry on these businesses under franchises of long duration by means of which they are enabled to charge prices that are considerably higher than they would be under conditions of pure competition.

*Power and light.*

Labor monopolies may be in the form of personal monopoly or of a monopoly of organization. In both cases, they aim to fix the price of labor. Personal monopoly, which is the result of special ability or training, is in very distinct contrast to the monopoly of organization which is the result of coöperative effort. Personal monopoly demands a high salary for the individual, while monopoly of organization secures standardized wages and proper working conditions for the members of the group.

**Labor monopolies:** *Personal.*

The trade-union principle is necessarily monopolistic; that is, it attempts to fix wages without regard to competition. The object of the union is so to organize and control the supply of labor that competition will be impossible. Thus, a price will be fixed which will represent the monopoly power

of the organization rather than the productive capacity of the individual members of the union or the competitive wage which would be fixed if each union member was bargaining individually for himself. As in the case of railroads, the principle which dominates union activity is "all that the traffic will bear." For example, the building trades-unions, which have a great monopoly power, command a very much higher wage than some of the more skilled operations in the tailoring trades where unions are weak and monopoly power small. In the first case, the supply of laborers is somewhat limited; in the second case, hordes of immigrants overload the market and make a competitive wage possible. Since labor has been organized on national and international lines, it has greatly enlarged its monopoly power and increased the possibility of controlling its price.

*Organization monopoly.*

Public monopolies may be either municipal, state, or national. The public municipal monopolies deal with transportation, water, light, the control of sanitation and health, and provision for police and fire protection. The state monopolies are monopolies of license fees, incorporation fees, charter granting, and the like. The national monopolies include the carrying of mails, the printing of documents, the building of irrigation dams, and other activities which the government may and does assume. To be sure, in these monopolies, prices necessarily vary from the competitive rate. In fact, the prices for some government services are considerably below the competitive rate. The essential factor in monopoly is, therefore, not the fixing of a high price through monopoly power, but the fixing of any price through monopoly power.

**Public monopolies.**

The number of ways in which monopoly power is expressed

in monopoly price is constantly increasing; and the problem of monopoly is, therefore, of constantly greater concern to the modern state. In a monopoly régime, the ordinary laws of price are largely suspended. The usual laws of demand and supply are, for the time being, thrown into the background; and, in the presence of monopoly, a peculiar condition of affairs exists whereby price is determined, not so much through competition, as through some form of monopoly power.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. Define monopoly.
2. Name the different kinds of monopoly.
3. Mention some monopolies of which you have knowledge, and explain what monopoly advantages they enjoy.
4. How is monopoly price determined?
5. Explain the difference between monopoly price and competitive price.
6. State the law of monopoly price.
7. What advantages are claimed for public ownership of natural monopolies?
8. Should the government attempt to regulate price when a monopoly is shown to exist?
9. Is it desirable in the government to allow a monopoly to charge different net prices for the same commodity?
10. What relation should, in the interest of public welfare, be established between monopoly and price?

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# CHAPTER XXVIII

## Instruments of Exchange

I. Money
   1. Primitive method of exchange:
      *a.* Barter
      *b.* Its difficulties
   2. Modern method of exchange:
      *a.* Necessity of money
      *b.* Uses of money
      *c.* Characteristics of money
      *d.* Kinds of money:
         (1) Early forms
         (2) Metallic money
         (3) Paper money

II. Credit
   1. Its meaning
   2. Kinds of credit:
      *a.* Book credit
      *b.* Promissory notes
      *c.* Checks
      *d.* Bills of exchange
      *e.* Banking operations:
         (1) Issue of notes
         (2) Deposit of money
         (3) Discount of notes
   3. Advantages of credit
   4. Its preservation

**Money.** — In primitive communities, exchange is accomplished, without the use of money, by means of barter. For example, if to-day you were to take a trip to Alaska and

attempt to buy frozen fish from a native, you would be compelled to give gold dust in exchange for the fish. If the fisher woman demanded a little more than you were willing to give for a particular fish, you would add to the gold dust, grain by grain, until you finally reached a quantity which satisfied both. If you desired an additional fish, you would be compelled to go through exactly the same process, — the amount of gold dust varying each time with the size and character of the fish.

**Primitive exchange:** *Barter.*

In the above illustration the process of barter was rather easily accomplished. If one person has gold dust and another person has fish and both wish to exchange, some sort of transfer can be effected. But suppose one man has bearskins and another has fish, and neither desires what the other has, the problem of exchange becomes more complicated. Barter is inadequate because it is extremely difficult to find two persons each having exactly what the other desires, and each willing to part with his possession; and, even when these conditions have been met, it is still necessary that an agreement be reached as to the relative values of the goods under consideration.

*Difficulties of barter.*

Consequently, in modern society, some other method of exchange becomes imperative. No community in which the exchange of commodities is a difficult and cumbersome process can advance to any considerable degree of civilization. A simple and effective instrument of exchange is as necessary to the progress and welfare of mankind as are improvements in the process of production itself. Therefore, man makes use of money as a convenient means of exchanging one commodity for another. Thus, money is not an end in itself, but merely a

**Modern exchange:** *Money necessary.*

means of securing what is wanted through the process of exchange.

Money, therefore, serves two useful purposes. In the first place, it is a common measure of value, serving as a medium for the expression of values in terms of price. The employment of money as a common denominator of value gives rise to its second function as a medium of exchange. By means of it, the shoemaker exchanges his shoes for food; the tailor, his clothes for furniture; the steel manufacturer, his steel for a palatial residence; in short, by the use of money, every one exchanges his particular commodity for what he requires to sustain and enjoy life.

*Uses of money.*

If money is to be used to measure value, it must, of course, itself possess value; and, furthermore, this value must be generally recognized throughout the community. In addition to this characteristic, money must also be durable and of such small bulk as to be easily transferable. The needs of modern society demand that money possess these three characteristics.

*Characteristics of money.*

In primitive communities, many things were used as money which lacked one or more of these qualities. For example, Indian "wampum" was of no great value; and the cattle used as money, centuries ago in Europe, would not to-day be considered portable. In the same manner wheat, although having universal value, would not make good money because of its destructibility and great bulk. Therefore, men have employed some form of metal as money. In early societies, as in Sparta, iron was used; and in other places copper was employed.

*Kinds of money.*

To-day, however, gold and silver fill the requirements of money much more perfectly than any of the other metals.

Besides being valuable, portable, and durable, they are easily divisible into small parts, each one of which possesses considerable value. To facilitate the use of gold and silver as money and to standardize the value of the amounts used, the government takes gold and silver bullion and converts it into small coins. These coins are stamped by the government and their value is thus guaranteed. In the United States, for example, the dollar is invariably equal to 23.22 grains of pure gold or 371.25 grains of pure silver. In each case, in order to make the coin more durable, alloy is added so that the " standard weight " of the gold dollar is 25.8 grains, while that of the silver dollar is 412.50 grains. Thus, metallic money is simply gold or silver (or some other metal) converted into a special form. Therefore, if money is plentiful, that is, if gold and silver are plentiful, its value decreases as would that of any other commodity. Since its value decreases, a particular coin is able to purchase less; and, therefore, there is a general rise in prices. On the other hand, should the supply of gold and silver decrease and money become scarce, its value would increase in proportion and there would be a resulting fall in prices.

Metallic money is a great step beyond barter. It standardizes values and removes the disadvantages connected with individual bargaining. On the other hand, metallic money has certain obvious disadvantages. It is bulky, clumsy to handle, and easily lost. These objections render metallic money less desirable than an advanced form of money known as convertible paper money, which is used side by side with metallic money in civilized societies. Paper money is a promise to pay, and, so long as this promise is kept, it is as good as metallic money. In fact, it has some advantages over metallic money. It is more easily trans-

ported, less bulky, and much more readily transferred from one individual to another. On the other hand, it is more easily debased. During the French Revolution, during the American Revolution, and in the Southern states during the Civil War, paper money was issued by the wagonload and became so debased that it required hundreds of dollars to buy ordinary commodities. Nevertheless, if paper money is issued and guaranteed by a wisely directed government, its advantages over metallic money are so great as to render it far more desirable.

**Credit.** — Civilized communities make use of another instrument of exchange known as credit. Paper money is, indeed, a form of credit; but to-day there are many other kinds of credit in use. In fact, so general has the use of credit become that many commercial transactions are carried on without the use of money at all. Credit, wherever it is employed, signifies confidence in business relations. The "charge and send" of the modern department store is one of the most widely known forms of credit. In a primitive community, because of the uncertainty of the future, one cannot buy goods without paying for them directly. In a modern stable community, however, it is perfectly possible to buy goods "on credit." Where a man's position is known, his ability to fulfill his financial obligations is so well understood that his promise to meet them at the proper time is accepted as the equivalent of actual payment.

**Its meaning.**

In modern business there are five kinds of credit that are of particular interest: (1) book credit; (2) notes; (3) checks; (4) bills of exchange; and (5) banking operations.

**Kinds of credit:**

To-day, book credit is in general use throughout the United

States, being characteristic of the small business operations of the corner grocery store as well as of the great commercial transactions of the modern department store. In the purchase of groceries, for example, you may buy goods for a whole month without paying a single cent; and, at the end of that time, the grocer sends you a bill. During the month, therefore, you have been receiving goods on book credit because the grocer had confidence in your ability to pay him. Likewise, in a great department store, hundreds of dollars' worth of goods are transferred from one person to another without the direct payment of money.

*Book credit.*

Notes are promises to pay at the end of a specified time. For example, if a merchant is short of present funds but desires to make an immediate purchase of goods, he gives his note for sixty days in payment of the debt. He has not the money now, but expects to have it in the near future. The manufacturer of whom he buys the goods has so much confidence in the merchant's ability to pay at the end of the time specified in the note that his promise is taken instead of money.

*Promissory notes.*

A check is an order on a bank to pay to a person money which he himself or another has on deposit in that bank. A lawyer, for example, wishing to pay his doctor's bill, does not give him actual money, but sends him a check for the required amount. The physician then takes this check to his own bank (which may or may not be the same as that of the lawyer) and either has it cashed or deposits it to his own credit. The lawyer does exactly the same thing when he receives a check from the physician in payment of professional services he has rendered. In case the lawyer and the doctor (and hundreds of others in like

*Checks.*

positions) have accounts at different institutions, the banks meet together in a " clearing house " and there settle whatever difference may exist between them by reason of the varying amount of their claims on each other. Through confidence in individuals and in banking institutions, the use of checks in business transactions has become a settled method of discharging financial obligations.

Bills of exchange also greatly economize the use of money. Such a bill is a device whereby two individuals at a great distance from each other effect a payment of a debt without the transfer of money from one to the other. Suppose, for example, a New York importer buys goods to the value of $50,000 (or £10,000) from a London exporter; and, at the same time, a New York exporter sells goods of the same value to a London importer. Instead of causing $50,000 to be transported twice across the Atlantic, the New York exporter, to whom money is due, sells to the importer in his city a bill of exchange for $50,000. This New York importer then indorses and sends this bill of exchange (which constitutes a claim on the London importer for £10,000) to the London exporter who, in turn, presents it to the importer in his own city and receives the £10,000 (or $50,000) due him. In this manner, by means of banking institutions and a bill of exchange, all four men have been satisfied without the necessity of transferring large sums of money across the water.

*Bills of exchange.*

In these transactions of credit it may readily be seen what an important part is played by the bank. In modern society, the bank is a credit factory, and its operations in turn depend upon the existence of confidence in business transactions. The issue and circulation of its notes show clearly the confidence of the public

*Banking operations.*

in its operations. A bank note is simply a promise to pay based on the resources and credit of a banking institution. If the bank's resources are good, its notes circulate at par. Its standing in the community rests entirely upon the confidence which men place in its financial integrity. In the United States, national bank notes are issued with government bonds as a basis; hence, their value is practically assured and no one hesitates to accept them.

The existence of confidence in banking institutions is also seen in their function of deposit. People deposit money in the bank for the purpose of saving it, or for the purpose of drawing checks against it. In either case they have confidence in the bank. If they deposit for the purpose of saving, the bank uses the money commercially. It makes loans to industrial enterprises, receives interest in return, and then pays to the depositor a part of the interest thus received for the money used in industry. Banks accept check accounts because, by this means, they secure the use of surplus money. On the other hand, the depositor opens a check account in order to pay his bills through bank credits without the intervention of money transactions.

Another leading function of banks is the discounting of notes, bills of exchange, and other forms of commercial paper. A merchant may have a note payable in sixty days and wish to realize credit on this note without delay. By taking it to the bank, he secures, in return for it, money or credit good immediately. Naturally, for this accommodation he pays a discount, which is one of the chief sources of revenue to banking institutions. In a similar manner, banking houses discount bills of exchange.

From this brief description of credit and credit instruments, it is apparent that credit is one of the most impor-

tant factors in facilitating modern commercial transactions. The advantages of credit instruments may be summarized as follows: (1) they economize the use of precious metals; (2) they save labor in the transfer of goods; (3) through credits in a savings bank, small savings may be amassed in large sums and converted into capital; (4) through banking institutions, large sums of money may be secured for commercial purposes in return for a promise, made under certain specifications, to pay back the loans.

**Advantages of credit.**

On the other hand, credit leads to extravagant living, stock watering, "high finance," and allows much speculation. Nevertheless it is one of the most effective tools in the hands of modern society. Its value is fundamental; its abuses incidental. Credit represents one of the great steps in the advance of commercial development. The urgent demand at the present time is for its preservation and safeguarding. Since credit is so essential to modern welfare and prosperity, every possible device should be employed to insure its integrity. Stringent regulations should be made and enforced in order to prevent its improper employment in "high finance."

**Its preservation.**

## TOPICS FOR CLASS DISCUSSION

1. Could the exchange system be as complex as it is to-day if we depended upon barter alone? Would the productive process be as efficient?
2. Can you cite any cases of barter being used to-day?
3. What difficulties of a system of barter are overcome by the use of money?
4. Name the qualities desirable in money.
5. Mention different things that have been used as money.

6. Would the following make good money: iron, wheat, diamonds, glass beads, seashells, beaver skins? If not, why not?

7. Are there any of the functions of money which would not be satisfactorily performed by the commodities mentioned in the preceding question?

8. Are there any respects in which gold is superior as money to the above-mentioned commodities? If so, explain the superiority in each case.

9. Why are copper and nickel used for coins?

10. What are the advantages of paper money? Its dangers?

11. What different meanings has the word "credit"? In which sense is it most often used in economics?

12. What is a check? A bill of exchange?

13. What effect does credit have upon the productiveness of capital?

14. What are the evils of credit?

15. How may these evils be remedied?

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# CHAPTER XXIX

## Modern Finance

I. Evolution of modern finance
   1. Importance of funds
   2. How secured:
      *a.* In former days
      *b.* At the present time:
         (1) Through corporations
         (2) Through "trust finance"

II. How companies are formed
   1. A slate company:
      *a.* The "promoter":
         (1) His first steps
         (2) His later steps
      *b.* The company organized:
         (1) How accomplished
         (2) How stocks are "floated"
   2. United States Steel Corporation:
      *a.* How formed
      *b.* Its capitalization

III. Results of modern finance
   1. Chief advantages
   2. A great danger
   3. Other evils
   4. Conclusion

**Evolution of Finance.** — The latest development of credit, as applied to industry, appears in the financing of great business concerns. Credit is intimately connected with modern finance because, by means of it, the business world is able to secure large sums of money with which to finance

its propositions. To carry on any business whatsoever, funds in some form are essential, since they may be exchanged for land, labor, and capital. The procuring of these funds constitutes one of the chief duties of the business organizer. **Importance of funds.**

In the early part of the nineteenth century business was conducted largely on an individual or partnership basis. One man, with a small amount of capital, went into business for himself. Or, if he did not have sufficient funds, he went into partnership with two or three of his friends who entered into an agreement with him and helped in the business management. **How secured:** *At first.*

This simple method of securing funds proved inadequate, and was succeeded by the corporation, which possesses so many advantages over the partnership method that it has revolutionized the system of business finance. In the first place, through the issue of stocks and bonds, enormous funds become available for industrial purposes. At the same time, according to the law of corporations, the liability of each shareholder is limited to the amount he has invested. Then, again, the corporation continues as long as its charter permits. If one director dies, another is elected to fill his place. Finally, while a hundred thousand people may hold stock of a corporation, a small group of men manages its affairs efficiently. For all these reasons the corporation marks a great advance in the evolution of modern finance. *At present.*

The next step in this evolution of finance accompanies the development of that form of business organization known as the trust. Although the board of trustees (from which body we get the name "trust") has been declared illegal, its essential feature — the absolute centralization of capital

and business control — still exists in some form of the holding company. Instead of appointing a board of trustees which holds stock of other companies, the promoters of the trust organize a new corporation. Here is the opportunity of amassing colossal sums of capital and of having these enormous funds managed by central control. To bring about these results, questionable methods have often been employed and have given rise to the phrase " trust finance." But, although " trust finance " may be used for illegitimate purposes, it is by no means necessarily illegitimate in character.

**How Companies are Formed.** — To realize more clearly the nature of this kind of finance, let us examine the usual method of organizing an industrial company. Comparatively few people really understand the procedure involved in converting a business proposition into marketable securities through the medium of modern finance. Suppose in a region fifty miles square there is located a group of slate quarries capable of producing the only slate in the neighborhood. Here is a natural resource furnishing an excellent basis for a combination of interests and requiring only that sufficient funds be secured for its development.

**A slate company:**

Looking over this field, the " promoter " — the man who organizes and directs combinations of capital — plans a definite proposition. After careful consideration of all aspects of the question, he concludes that it is possible to form a combination to control slate production in this region. He first goes to the bankers who in the past have assisted him in financing his enterprises, explains the situation to them, and asks for their coöperation. If they have confidence in the promoter and if the

***The " promoter."***

scheme sounds interesting, they agree, in the event of the proposition proving desirable, to render him any necessary financial assistance.

Having thus secured his backing, the promoter proceeds into the slate region and goes from quarry to quarry buying up options. That is, he secures for perhaps one thousand dollars the right to purchase for a stated sum a slate quarry at any time before the end of two years. If the promotion is successful, the promoter returns after a few months to his banking house and states that he has secured options on all the properties. He also makes a report concerning their capacity, the quality of their product, the possibility of their development, and the prospect of effecting economies.

If, at this stage, the proposition looks unfavorable, it is dropped. If, however, it seems feasible to organize a successful combination, a charter is applied for and the company incorporated; stocks and bonds are issued by it; and the options on the various slate properties are taken up. Perhaps these stocks and bonds are given to the owners of the slate quarries in return for their properties. It may be, however, that the owners insist on cash payment. In this case, the stocks and bonds are taken by the banking house and "floated." This is done by the agents of the banking house traveling over the country, visiting financial institutions, trust companies, or individuals likely to buy such securities and attempting to sell those of the newly organized company.

*The company organized.*

These securities may be listed on one or more stock exchanges. In that case they are sold to the general public, if people choose to buy them in the usual way. By whatever method the promoter and his banks proceed, however, the ultimate aim of the company is to unload the securities

on the public, organize the business on an efficient basis, and make it pay dividends on the securities issued. If the promoter has used good judgment and if the company is not overcapitalized, the new corporation has a good chance of success. Confidence on the part of investors, however, is absolutely essential to the process of successful promotion.

This description of the organization of a hypothetical company to control the slate business in a given locality has been paralleled a hundred times in the course of the last twenty years. The organization of the United States Steel Corporation was, in a large way, an almost exact duplicate of the slate quarry example, except that the proposition to consolidate the steel interests was most welcome to the steel manufacturers themselves. Competition had been very severe. Numerous small trusts had been formed. The Morgan interests, well acquainted with this situation, undertook to organize a combination of all of the independent producers. Gradually the principal companies were consolidated, with the exception of the Carnegie Steel Company, which refused to combine. In reply to the trust's threats, Mr. Carnegie proposed to erect a steel plant on Lake Erie which would produce steel rails more cheaply than any plant the trust then owned. Eventually, however, the Carnegie plant was bought out at Carnegie's own price, about $350,000,000.

**United States Steel Corporation:** *How formed.*

At its inception, the steel trust was overcapitalized because of the enormous prices which some of the consolidating firms received for their plants, and because of the great bonuses secured by the promoters. However, the reconstruction of the plant and the purchase of the Tennessee Coal and Iron Company established the

*Its capitalization.*

trust on a strong basis. This, together with the reorganization of steel manufacturing which the steel trust has recently effected, renders it very probable that at the present time the total capitalization of the trust (almost one billion and a half dollars) represents something like actual value.

**Results of Modern Finance.** — The advantages of modern finance are twofold. In the first place, the corporation, as financed by the modern banker, gives the aggressive business man an opportunity to secure large funds of capital. At the same time, the small investor is enabled to invest sums of capital in a large progressive business, and thus become a participant in a successful enterprise. Neither of these transactions would be possible without the institution of credit. Stocks and bonds, which together form one of the most important kinds of credit instruments in modern industry, furnish a common basis for the small investor and the large industrial enterpriser. Of course, the savings bank may occasionally intervene between these two; but, nevertheless, they finally come together through the medium of securities.

**Chief advantages.**

Financial methods, as employed by the holding company of to-day, have wrought wonderful changes in our financial and industrial system. Fifty years ago, the Steel Trust would have been considered an impossibility because it was generally believed that no single business concern could finance and manage so large an enterprise. Gradually, however, men learned how to integrate individual industries. This was considered, and rightly so, a wonderful achievement. It was followed, however, by the development of financial centralization which permitted one management to control several integrated industries. By means of this financial control, it might be pos-

**A great danger.**

sible for effective power over all industrial enterprise to be centered in the hands of a half dozen financiers.

Other evils are incident to the system of modern finance. Chief among these are overcapitalization, "stock watering," and public deception regarding the value of securities. All of these are related to each other, but the one most generally denounced is "stock watering." This results from the fact that the par value of the stock does not represent its real value. The difference between these two values is the "water" in the stock. It can readily be seen what injury is done to good business management when dividends are paid on an amount of wealth larger than that which is actually engaged in productive enterprise. Paper values are not real values.

**Other evils.**

Every effort should be made to preserve the legitimate character of modern finance. Finance is a development of credit and depends upon credit for accomplishing its purpose. No sanction, therefore, should be given the methods of those financiers who by their misrepresentations serve to weaken public confidence. Their acts should be rigidly scrutinized and a sharp distinction drawn between legitimate and illegitimate financiering. Social welfare is largely dependent upon the maintenance of a high standard of integrity in the development of modern financial methods.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. What is the function of a promoter?
2. Explain the steps by which a trust is organized.
3. What is meant by the "capitalization" of a trust?
4. On what basis is the amount of capitalization determined?
5. What is stock watering? Why is it resorted to?
6. Does stock watering harm the public? The investor?

7. Could large scale production be carried on without modern systems of financiering?

8. Explain the organization of the Steel Trust. Of the old Standard Oil Company.

9. What principles of finance are illustrated by these two organizations?

10. What measures must be adopted to regulate financiering?

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# CHAPTER XXX

## Foreign Trade

I. The underlying principle
   1. Why men trade
   2. How trade developed
   3. International trade:
      *a.* Its primary basis
      *b.* The disturbing factors:
         (1) Commercial expansion
         (2) Overproduction
      *c.* American foreign trade:
         (1) Chief exports
         (2) Chief imports

II. General features of foreign trade
   1. Its chief characteristics:
      *a.* World markets
      *b.* Standard prices
      *c.* Method of payment
   2. How it is restricted:
      *a.* Chief kinds of restrictions
      *b.* Purpose of protection
      *c.* The result accomplished

Of the various problems that arise in a discussion of the exchange of wealth, none is more important than the trade relations of civilized communities. In fact, foreign trade is vitally connected with modern industrial life.

**The Underlying Principle.** — It is perfectly obvious that, in the present stage of the world's economic development, an individual cannot produce a sufficient variety of economic

goods to satisfy his manifold wants. This is an age of specialization in production and of minute subdivision in labor. For example, one man or a group of men produces nothing but woolen goods; another confines his attention exclusively to the production of food stuffs; while a third concentrates all his time and effort upon the construction of building materials. If each man, therefore, consumed only what he produced, many of his wants would remain unsatisfied. He must consequently trade with his fellow men and secure from them, in exchange for the results of his own labor, the commodities which they produce that are essential to his happiness. In modern communities, therefore, individual and social welfare is absolutely conditioned upon the free interchange of commodities.

**Why men trade.**

Of course, in primitive societies, this problem of exchange was comparatively insignificant. Every individual produced, in some fashion, all that was absolutely needed to sustain life, and his wants being few and undeveloped, he was not dependent upon the labor of his fellow man. To-day, however, the trade relations of society have developed to such an extent that nations war upon each other in order to secure the benefits accruing from wider trade relationships. Beginning with insignificant local exchanges, the sphere of trade gradually widened until it extended to a free interchange of commodities produced within the same country. Thus domestic trade was established. But as the facilities for transportation developed, a nation's trade expanded beyond the confines of its own borders until domestic trade was supplemented by foreign trade. In this way there was inaugurated international trade which now plays such an important part in the life

**How trade developed.**

of all great commercial nations. In fact, the existence of nations sometimes depends upon the preservation of their international trade. Should England, for example, at the present time be cut off from her trade connections with the rest of the world, her people would suffer severely from the curtailment of their food supply.

The underlying economic principle of international trade arises primarily from the character of natural resources and from the fact that certain parts of the world are peculiarly fitted for the production of particular commodities. For example, coffee grows well in Brazil; tea is cultivated in China; and cotton is cheaply grown in the southern part of the United States. In a similar manner, Canada, the United States, South Africa, and Australia easily produce wheat; while northwestern Europe, by reason of its mineral deposits, is peculiarly suited to manufacturing. Thus, each of these areas has a specialty for which it might well seem that nature intended it. This local fitness for production, due to favorable physical conditions, is the primary basis for international trade. Even to-day, in spite of national prejudices, this principle of international exchange asserts itself.

**International trade: *Its primary basis.***

In addition to the influence of national solidarity, two other factors interfere with the full utilization of this physical basis for international trade. In the first place, a commercially expanding nation with large resources and limited markets aims to secure additional trade in spite of the law of local fitness. For this reason, although northwestern Europe is peculiarly suited to manufacturing, many large American trusts enter European markets, and, notwithstanding the extra cost of transportation, sell their products there more cheaply than at home. In the

***The disturbing factors.***

second place, surplus products are often "dumped" in a foreign market. That is, when a manufacturer finds that he has produced more goods than can be sold at home, he sells them abroad at greatly reduced prices. In both these cases, the principle of local fitness has been violated.

In order to ascertain whether this principle is generally observed in American foreign trade, let us examine the character of American exports and imports. Although the amount of manufactured goods which the United States exports is gradually increasing, agricultural products make up half of our export trade. Chief among our exports are cotton, provisions, iron and steel manufactures, breadstuffs, copper and its products, mineral oils, gold and its products, live stock, tobacco, and agricultural implements. On the other hand, the imports of the United States consist largely of sugar, coffee, chemicals, drugs and dyestuffs, cigars, raw silk, India rubber, wool, jewelry and precious stones, fruit and nuts, and some copper and iron manufactures. In a general way, therefore, the United States exports what the country is fitted to produce and imports what other countries are especially able to turn out. Although there are some striking exceptions to the rule, the trade relations of the United States may be said, for the most part, to conform to this general economic principle.

*American foreign trade.*

**General Features of Foreign Trade.** — To-day international trade has taken on some well-defined characteristics. In the first place, certain localities have developed into world markets; that is, definite places have become centers of trade for particular commodities. For example, Chicago and Liverpool are world markets for wheat. Each of these markets feels the effect of

**Its characteristics:** *World markets.*

adverse conditions in the other. If there should be a wheat famine in Europe and an abundant crop in the United States, the export trade of the United States in this commodity would increase enormously. On the other hand, if conditions were reversed, American exports would fall off.

In this manner, prices of standard commodities are fixed in world markets, because the condition of one market offsets that of the other and prevents great price fluctuations. While, normally, prices largely depend on conditions of production, they themselves determine the movement of international trade, and this, in turn, brings about an equilibrium in price. Thus, in response to the difference in prices at two centers, wheat may be shipped from one country to another, — a movement which will ultimately result in this difference in price being largely eliminated. With increased exportation (demand), low prices will gradually rise; and with increased importation (supply), high prices will gradually fall. The cable, the telegraph, and telephone easily make known these differences, and a gradual equilibrium in price is effected.

*Standard prices.*

Another unique feature of international trade is the fact that it is carried on largely without the use of money. The exports of a country are used to pay for its imports. If the two amounts always balanced, no money of course would be needed. When exports are greater than imports, however, some method of payment must be devised. For example, if, during a certain period, the United States exports to England $100,000,000 worth of goods and imports from England $75,000,000 worth of goods, England at the end of that time owes the United States $25,000,000. As we have seen in the chapter on Instruments of Exchange, the usual method of canceling foreign debts is through bills

*Method of payment.*

of exchange, which make the actual transport of large sums of money across the water unnecessary. Occasionally, however, gold may be shipped from one country to another either to settle a trade balance, or to obviate the payment of high rates on bills of exchange.

In one form or another, certain restrictions have always been placed on international trade. In America the Navigation Acts of Parliament were followed by the tariff acts of our own government, which serve indirectly to restrict freedom of commerce. Of course, a tariff for revenue only is but a slight restriction on international trade. However, a protective tariff forms a considerably greater obstruction to commerce, while retaliatory tariffs and tariffs so high as to become prohibitive prove effectual barriers to the free development of international trade relations.

**Its restrictions:** *Chief kinds.*

The purpose of restricting commerce through a protective tariff is obvious. Suppose, for example, an American manufacturer can produce steel rails for twenty dollars a ton and a German manufacturer can actually sell them in New York for fifteen dollars a ton. Under these circumstances, the American manufacturer will either have to invent a cheaper process of manufacture or be forced out of business. The first he is unable to do. Therefore, to protect him, the government passes a tariff act which makes it possible for him to manufacture steel rails profitably without being undersold in his own market. In order to develop home manufactures, cheaper foreign goods are thus displaced by more expensive native products. Whenever the manufacturers of one nation are unable to compete successfully with those of another, artificial barriers in the form of tariff laws will be enacted for their protection.

*Purpose of protection.*

Thus, the principle of protection comes into conflict with the principle of local fitness which is the basis of the doctrine of free trade. Under normal conditions, there is no doubt that free trade is beneficial to a community. In addition to widening the sphere of friendly commercial intercourse, it results in cheaper production and better products. However, protection itself results in many benefits. Chief among these is its creation, in our own country, of a complete and self-sustaining economic unit. Should the United States to-day be cut off from the rest of the world, little difference would be felt in the amount and character of the goods consumed.

*The result accomplished.*

## TOPICS FOR CLASS DISCUSSION

1. Why do men trade?
2. Explain the connection between individual trading and community trading.
3. Is foreign trade extensive in the South Pacific cannibal islands?
4. Why did foreign trade develop?
5. In foreign trade, is one nation the loser and another the gainer?
6. May both nations gain from international trade?
7. What are the advantages of international trade?
8. If Canada were annexed to the United States, would the character of the trade between the two regions be changed?
9. Would a rise in prices such as took place during the Civil War increase imports?
10. When China becomes modernized, can the United States expect to export large quantities of manufactures to that country? Of agricultural products?
11. How is a country like England, which has no gold mines, supplied with gold?
12. Would you expect gold to have a lower value in Alaska than in England? Why?
13. Why do we not have export duties in the United States?

14. What is the distinction between a protective tariff and a tariff for revenue only?

15. What is protection? Discuss the arguments offered in its support.

16. What is free trade? What are the arguments in favor of it?

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# CHAPTER XXXI

## TAXATION

I. Division of the taxing power
   1. Federal taxation:
      *a.* Customs duties:
         (1) Kinds of duties
         (2) Articles taxed
      *b.* Excise taxes:
         (1) Meaning of excises
         (2) The articles usually taxed
         (3) Other goods taxed
      *c.* Other taxes:
         (1) Corporation tax
         (2) Income tax
   2. State and local taxation:
      *a.* The character of each
      *b.* The general property tax:
         (1) How it is levied
         (2) Its defect

II. Principles of taxation
   1. Purpose of taxation:
      *a.* The former practice
      *b.* The present policy
   2. Principle of apportionment
   3. Burden of taxation:
      *a.* Indirect taxes:
         (1) How their payment is shifted
         (2) Who bears the burden
         (3) The defect in the American system
      *b.* Direct taxes:
         (1) Some examples
         (2) Status of the income tax
      *c.* The conclusion

Closely connected with the subject of trade is the question of taxation. In fact, while the primary purpose of protective tariffs is the encouragement of home industry by the imposition of restrictions on international trade, tariff acts also serve as effective instruments of taxation and are therefore very generally employed by modern governments to produce the revenue required for their maintenance.

**Division of the Taxing Power.** — In the United States, tariff or customs duties are levied exclusively by the federal government, because Congress has sole power to regulate trade with foreign nations. It will at once be seen that this division of commercial powers between state and nation results in a corresponding division of the power of taxation. While the state is thus excluded from making use of particular forms of taxation, the taxing power of the national government is also restricted in certain respects. For example, no taxes may be laid on articles exported from any state and direct taxes must be laid in proportion to the population.

Nine tenths of the revenue of the United States is derived from customs duties and excise taxes. Customs duties are either specific or *ad valorem* according as to whether they are based on quantity or value. In the United States, the number of articles on which such duties are laid is very large. Chief among these are wool, sugar, silk, iron and steel, cotton, tobacco, flax, chemicals, glass, leather, earthenware, and jewelry. Thus it will be noticed that not only luxuries, but also many necessaries of life, are subject to this kind of taxation. While there is always a "free list," this enumerates such a small number of articles as to make it of insignificant importance.

**Federal taxation: *Customs duties.***

But while the tariff yields a large revenue, the income derived from excise taxes in the United States is equally

important. Excises are taxes laid on articles consumed, sold, or manufactured within a country, and the revenue they yield is known as "internal revenue." The commodities most usually subject to this kind of taxation are liquors and tobacco. Because they are luxuries, these goods are heavily taxed, and by reason of their general use yield great revenues. However, these are not the only goods subject to an excise tax. For example, oleomargarine, filled cheese, mixed flour, and adulterated butter have been included in this kind of taxation. When, too, during times of great necessity, it has been found necessary to increase our internal revenue, special taxes have been laid on various articles. During the Civil War, nearly all forms of luxury were subject to taxation; and again, during the Spanish-American War, playing cards, patent medicines, and legal documents were likewise taxed and made to yield considerable revenue.

*Excise taxes.*

While these are the usual forms of taxation that the United States has relied upon to secure revenue, other taxes, such for example, as the recent tax laid upon corporations, are from time to time utilized. Such a tax serves a double purpose. It is not only a source of revenue, but, by reason of the publicity entailed, it also serves as a helpful means of regulating corporations. An income tax has also been tried by the federal government. Two such laws have been enacted. The first, passed during the Civil War, was declared constitutional; while the second, enacted in 1894, was declared unconstitutional on the ground that an income tax was a direct tax and therefore must be laid in proportion to the population. This law of 1894 laid a tax of two per cent on all incomes, including those of corporations as well as of individuals, above $4000 a year.

*Other taxes.*

Either through another reversal of the Supreme Court or through constitutional amendment such a tax may again be employed.

Coming now to the subject of state and local taxation, we find that there are likewise certain well-defined ways in which the states and local units secure their revenues. The states rely usually upon the general property tax and taxes laid upon corporations, licenses, and inheritances; while the local units also depend largely upon the general property tax in addition to special license and franchise taxes as well as poll taxes. Therefore, the general property tax, which the federal government does not employ, is the main source of local revenue. Everywhere it is in evidence. Assessors value the property; governing bodies fix the tax rates; and local authorities collect the taxes. This general property tax, although intended for both real estate and personal property, does not effectively reach personal property. The reason for this is obvious. Land and houses cannot be hidden from the eye of the tax collector, but personal property may be readily concealed. This phase of the tax, therefore, has the effect of discriminating against conscientious citizens.

**State and local taxes.**

**Principles of Taxation.** — All systems of taxation, whether national or local, should be made to conform to certain general principles. In the first place, since a tax is a compulsory payment made by an individual for the support of government, its purpose should be public. Otherwise, as in the past, if taxation were employed for private purposes, it would constitute a form of robbery and spoliation. So long as the proceeds of taxation went into the pockets of kings and nobles and were spent by them in riotous living, taxation meant robbery. To-day, however,

**Purpose of taxation.**

although the national government is obliged to spend large sums of money for purposes of protection and maintenance, the state and local governments devote their incomes largely to the advancement of education, general security, and social improvements. Among the latter, better streets, cleaner water, and more playgrounds are assuming greater importance. Increased taxation may therefore mean higher social welfare.

Another important point to be considered in any system of taxation is the principle according to which taxes should be apportioned throughout the community. On this question there are two opposing theories. On the one hand, it is maintained that taxes should be levied according to special benefits received; on the other, it is held that they should be laid in proportion to ability to pay. If taxes were levied according to the first principle, those receiving most benefits — the poor and needy — would be taxed most heavily. This would evidently be unjust. If, however, taxes were laid in proportion to ability to pay, those enjoying the comforts of life — the rich and well-to-do — would contribute largely to the support of government. At the same time, the mere existence of government would confer a very great benefit on these wealthy classes and justify their large contributions to public support. Therefore, we must conclude that ability to pay, not benefits received, should be the determining factor in apportioning taxes.

**Principle of apportionment.**

Directly connected with this subject of apportionment is the question of the burden of taxation. A tax may be intended for one person but paid by another. That is, the first individual shifts the payment of the tax to another and, in this manner, makes the burden

**Burden of taxation:**

of taxation fall on some one not originally intended. Taxes which may be shifted are usually spoken of as indirect taxes, while those which may not are called direct taxes.

Customs duties are typical of indirect taxes. This tax intended for the foreign manufacturer is, of course, not really paid by him, because he shifts its payment to the importer; and the importer, in turn, shifts it to the consumer in the form of higher prices. Meanwhile, if the consumer decides to buy the domestic article, he finds of course that its price has correspondingly increased. Therefore, whether he buys the domestic or imported article, the burden of this tax falls on the consumer. If he does not pay it to the government, he does to the home manufacturer. In the United States, since customs duties are so generally levied and since they fall so largely upon commodities in common use, like sugar and woolen goods, the burden of customs taxation falls chiefly upon the poor. This is further accentuated by the fact that excise taxes, which may also be shifted, are heavily laid on tobacco and liquors, which constitute an important item in middle class consumption.

*Indirect taxes.*

On the other hand, direct taxes are taxes which cannot readily be shifted. The best examples of these are poll taxes, taxes on land, and on individual income. As we have seen, the Supreme Court once declared this last-mentioned tax an indirect and then later a direct tax. In the first case, it interpreted the phrase "direct taxes" to mean those taxes that were considered such when the Constitution was adopted, viz. poll and land taxes. In its later decision, it considered a tax on income to be a tax on the property from which the income is derived, and therefore a direct tax. Since this tax was not laid in proportion to the population, the Court declared it unconstitutional.

*Direct taxes.*

Leaving aside the question of constitutional difficulties, it seems unfortunate from an economic standpoint that no federal income tax is at present permissible. The great burden of taxation imposed on the poor by means of duties and excises should be offset by some form of direct taxation of the wealthier classes. An income tax seems the most simple means of bringing about this more just apportionment. While the well-to-do classes are now subject to the general property tax of the state and local governments, the concealment of stocks and bonds and other personal property offers frequent opportunity for escaping just taxation.

*The conclusion.*

## TOPICS FOR CLASS DISCUSSION

1. What are the reasons for the growing demand for a reduction of the tariff?
2. Explain the attitude of the different sections of the country toward the tariff at the present time.
3. What advantages does a system of customs duties offer as a means of raising revenue?
4. Would customs duties be a satisfactory source of revenue for the United States in time of war with a great naval power?
5. Make a list of the disadvantages of a system of customs duties.
6. Who bears the burden of a revenue tariff?
7. Who bears the burden of excise taxes?
8. Who bears the burden of an income tax?
9. Should incomes below a certain amount be exempt from taxation?
10. How high a rate should you approve in taxation of inheritances?

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# PART V

# THE DISTRIBUTION OF WEALTH

## CHAPTER XXXII

### Preliminary Survey of Distribution

I. Nature of distribution
   1. Meaning of distribution
   2. The shares in distribution:
      *a.* How they arise
      *b.* What they are
   3. Inequalities of income:
      *a.* Causes:
         (1) Monopoly of land
         (2) Monopoly of capital
         (3) Exploitation of labor
         (4) Difference in productive capacity
      *b.* The consequence
      *c.* The remedy

II. Groups of distribution theories
   1. The productivity theory:
      *a.* Its basis
      *b.* What it advocates
   2. The monopoly theory:
      *a.* Its basis
      *b.* What it advocates
      *c.* Why monopoly is emphasized

In our treatment of economics thus far, we have considered the problems arising from the consumption, production,

and exchange of wealth. The chapters devoted to a discussion of the mechanism of exchange have shown us that this phase of economics, in common with all its other parts, is intimately connected with the subject of individual and social welfare. There still remains one phase of wealth that we have yet to consider, that is, the problem of its distribution.

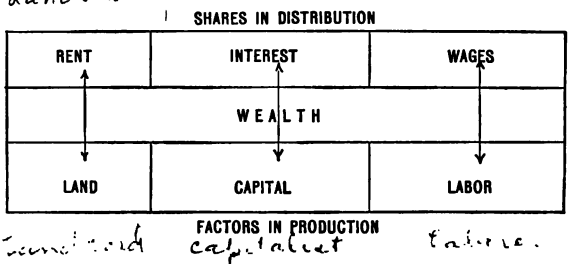
**Nature of Distribution.** — The problem of distribution deals with the principles according to which the wealth of society is distributed among its members. Exchange deals with the mechanism whereby goods are transferred from one person to another through the medium of money, credit, trade, or some similar device. Distribution, on the other hand, considers the question, "How much wealth goes to one member of society and how much to another?"

**Meaning of distribution.**

Two questions naturally suggest themselves to the student of the distribution of wealth. In the first place, "How is wealth created?" In the second place, "To whom does wealth belong?" If three men build a boat, it belongs to them. If, however, instead of a boat, all the wealth of society is to be considered, it becomes necessary to inquire in detail what factors produced this wealth in order to know who are entitled to it and how it should be distributed. The factors which produce wealth are land, labor, and capital. Therefore, if land, labor, and capital have produced the wealth of society, land, labor, and capital must be entitled to its use and enjoyment. This is the basis of the distribution of wealth throughout society. Each factor in production is entitled to a share in distribution by reason of the part it has played in production. Each share in dis-

**The shares in distribution.**

tribution is then given a special name in accordance with the factor it represents, — land's share is called rent; capital's, interest; and labor's, wages. These factors in production and shares in distribution may be represented in a simple manner by the following diagram:




In our further discussion it will be shown that certain modern conditions interfere to prevent the shares in distribution from corresponding exactly to the respective parts played by the factors in production; that other elements enter not only into production but also into distribution; and that these shares themselves, as the diagram might seem to indicate, are by no means equal in amount.

This fact of the inequality of the different shares in distribution is seen in the inequality of income of different classes of people throughout society. Of course rent really goes, not to land, but to the landlord, and interest not to capital, but to the capitalist, while wages goes to the laborer. Therefore, if rent and interest increase rapidly and wages does not, the income of landlords and capitalists will rise, while that of labor may remain almost stationary. These inequalities of wealth and income constitute a very real factor in the life of every modern community. Fifth Avenue stands out in sharp contrast to the lower East Side. Compared to the adversity of the

**Inequalities of income:** *The causes.*

many, the prosperity of the few is exceptional. Here, for example, is one family with an income of five hundred dollars a week, and there another, struggling to maintain itself on five hundred dollars a year. What, then, are the causes of this great inequality of income? Many explanations and suggestions have been offered to account for this difference of wealth, but there is little harmony of opinion among writers as to its ultimate cause. To-day, however, in America four factors seem to stand out as prominent and striking causes of such inequality: (1) monopoly of land, (2) monopoly of capital, (3) exploitation of labor, and (4) difference in productive capacity.

The monopoly of land or natural resources in the United States has already been referred to and its effect on prices explained. No one can fail to see the social importance of this monopoly control. Since national prosperity is directly dependent on natural resources, and since individual welfare is closely related to social prosperity, every effort should be made to extend the use of natural resources to all members of the community. If, however, these resources should be monopolized or withheld from use by a few individuals, the great mass of people would either be deprived of advantages or forced to pay exorbitant prices for the enjoyment of their products. Through the monopoly of land, prices may be so controlled as to deprive the consumer of a large part of his income.

Monopoly price, depending on the monopoly of natural resources, is thus one means of shifting income from one class to another. But the determination of price does not depend entirely upon the monopoly of natural resources. Monopoly of capital is also a factor in determining monopoly price and in bringing about great monopoly profits. The

concentration of great masses of capital in the hands of few individuals gives them a tremendous advantage in fixing prices, in creating profits, and in diverting income from others to themselves. Likewise, special privileges secured through patents and copyrights play an important part in creating monopoly profits.

Because of this monopoly power, some writers maintain that the wealth of one group in society often increases at the expense of another. They take the view that, if certain men receive more than they produce, others receive less than they produce. A monopoly profit is a profit secured through the possession of some unusually great power, either in the form of land resources, or capital resources, or labor resources. Setting aside, for the moment, the monopoly power that comes from exceptional capacity or unusual training, it is maintained by this school of writers that the monopolist, deriving his power through an exceptional control of land or capital, is reaping where he has not sown, — that is, securing value which he has not produced. If, therefore, labor has produced this value and is deprived of it, the monopolist is charged with exploiting labor for his own benefit. In this manner, monopoly of land, monopoly of capital, and exploitation of labor constitute, in the opinion of these writers, a series of causes which explain many of the inequalities in social income.

Opposed to this explanation of inequalities of income we have the view of another school of writers which seeks in labor itself the cause of such inequality. According to this view, it is not the monopolist, nor the capitalist, nor the so-called exploiter who is responsible for differences in income. These differences are due primarily to differences in earning capacity. If one man's income is five hundred

dollars a year and another's five thousand dollars a year, the difference is due to the fact that the first laborer has but one tenth the productive capacity of the second. Labor itself — not land or capital — is thus held responsible for its own condition.

Despite any difference of opinion regarding the causes of these inequalities of income, there can, however, be no doubt of their existence and consequences. We have seen that a standard of living is determined largely by wages, and we now see that wages depends upon distribution.

*The consequence.* Therefore, inequalities of income have a direct effect upon standards of living. While, to-day, comparatively few individuals have such great incomes as to permit the development of the highest possible economic standards, large numbers of people are existing on a standard of living so low that they are scarcely able to secure the necessaries of life. As a consequence, the children of these families are likely to grow up to be inefficient men and women.

These low standards and wages brought about by inequalities of income can find no justification in the nation's natural resources or in the productive capacity of the industrial system. To-day, the United States easily produces sufficient economic goods to maintain every family on a

*The remedy.* basis of efficiency. There is enough wealth for all to enjoy. If, then, our productive system is so efficient, why does poverty exist beside riches? Evidently the answer to this question may be found in a study of the present system of the distribution of wealth throughout society. If we would seek to remedy these inequalities of income, we must bring about some change either in individual capacity or in the system of distribution whereby

the different shares of wealth that go to land, labor, and capital may become more equal.

**Groups of Distribution Theories.** — From this brief discussion it may readily be seen how vital is the problem of wealth distribution. Without a proper distribution of wealth, the attainment of economic ideals, such as efficiency, opportunity, prosperity, and welfare, would be impossible.

Unfortunately, economists do not agree on one single theory of distribution. In fact, opinion has been so divided that many conflicting theories have been advanced from time to time. In general, however, theories of distribution may at present be divided into two main groups, (1) those emphasizing productivity, and (2) those emphasizing monopoly as the determining factor in the problem. While both these schools of writers believe in social justice, they vary in their explanations of the causes of inequalities of income. The productivity school bases its theory on competition and productive capacity. Its followers hold that certain natural laws always tend to produce given results. One of these natural laws, competition, will result in a just system of distribution provided it be left free to work itself out. In the absence of competition, distributive justice is obviously impossible; but were competition widespread, a just system of distribution founded on productive capacity would be inevitable.

**The productivity theory:** *Its basis.*

Proceeding on this basis, the productivity theorists apply their system to modern society through the program of government regulation. They admit the presence of monopoly but direct all their efforts towards its abolition because they believe that only through competition will justice be realized. That is, they advocate strict govern-

ment regulation of industry. This theory holds that the shares in distribution are determined exactly by the extent of productivity. That is, if a tin dipper costs ten cents, and if natural resources contributed two cents to its production, under a strictly competitive régime, natural resources would be paid two cents in rent. In the same way, if labor contributed four cents, labor would receive four cents as wages. Thus, if competition can be made free, society will naturally right itself by the action of this universal law.

*What it advocates.*

The monopoly theory of distribution, in distinct contrast to this productivity theory, looks upon monopoly as the factor of prime importance and as the logical outcome of present social development. Social evolution has reached a stage in which monopoly is inevitable. This school, therefore, takes the position that no person is to blame for modern industrial monopoly. Monopoly is not "wrong." It is merely a product of modern industrial conditions. In other words, monopoly is an economic law of modern society. Therefore, in solving the distribution problem, monopoly, not productivity, is looked upon as of primary importance. According to the theories advanced by this group of thinkers, if natural resources contribute but one cent to the actual production of the dipper, nevertheless, because of the monopoly which the owner of the natural resources possesses, the amount which goes to him may be three cents, — one cent representing the contribution of natural resources and two cents representing monopoly power.

**The monopoly theory:** *Its basis.*

If this monopoly theory be true, the method of securing a more equal distribution of wealth lies in the increase of monopoly power rather than in its abolition. This school,

therefore, advocates increasing labor's monopoly power. Does the laborer feel that he is being unfairly treated by not securing the full value of his work? Or, does he think he is being exploited by his employer? If so, he has but one remedy. That is, he must secure through organization, education, or legislation some special monopoly which will enable him to make headway against the monopoly enjoyed by his employer. *What it advocates.*

In contrasting these two theories, it may be said that the productivity theory of distribution is really a prophecy of what might be under ideal conditions of competition, while the monopoly theory is an analysis of things as they really are. For this reason the monopoly theory furnishes a much more adequate basis for a discussion of modern conditions than the productivity theory. While, therefore, in the following chapters, the productivity theory of distribution will be kept in mind, chief emphasis will be laid upon the monopoly principle whenever it appears to be the determining factor in distribution. Throughout the entire discussion of the principles of distribution, it will be the aim, however, to present as nearly as possible one consistent theory of distribution rather than a disjointed résumé of conflicting theories. *Why monopoly is emphasized.*

## TOPICS FOR CLASS DISCUSSION

1. In Economics why should the emphasis be laid to-day on the subject of distribution rather than on that of production?

2. If a man produces one commodity, how does he satisfy his wants? Upon what will his ability to satisfy his wants depend?

3. What idea lies back of the expression "distribution of wealth"?

4. What are the different methods by which people obtain their incomes?

5. How can a chair be said to be distributed among the land, labor, and capital creating it?

6. What is the relation of private property to distribution? How is this illustrated in the case of land? In the case of capital?

7. Was there any distributive problem when each household was economically self-sufficient?

8. When we speak of the economic inequalities of to-day, do we mean inequalities of property or of income?

9. What is the relation between political democracy and industrial democracy?

10. If a man coöperates with others in making a commodity, what determines the extent of the share he can secure?

11. Should a man be paid according to his ability or according to his needs?

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# CHAPTER XXXIII

## The Theory of Rent

I. Nature of rent
   1. What rent means
   2. How rent is paid
   3. How rent arises:
      *a.* From differences of fertility
      *b.* From differences of location

II. The grades of land
   1. The usual grades
   2. The "no-rent" land
   3. How rent varies:
      *a.* Between grades
      *b.* Within a grade:
         (1) Marginal rent
         (2) Differential rent
         (3) An illustration
      *c.* The general principle
      *d.* Explanation of diagram
      *e.* Other applications of the law
   4. The conclusion

**Nature of Rent.** — The most generally accepted and most firmly established theory of distribution is that relating to rent. Rent is the return on natural resources and, in economics, means the amount of wealth that "land" receives for its part in production. Therefore, from an economic standpoint, "rent" means something quite different from the sense in which the word is used by the real estate broker. The latter uses the

**What "rent" means.**

term to represent not only the return on land — the lot — but also the return on capital — the house. Real estate rent, therefore, includes both rent and interest; but economic rent signifies simply the return on land. This distinction is fundamental and must always be borne in mind.

It is equally important to remember that rent exists regardless of the manner in which it is paid or of the person to whom it is paid. For example, land may receive its share of rent in the form of so many extra bushels of wheat as well as in the form of money representing these bushels of wheat.

**How rent is paid.** Likewise, this rent is paid to land regardless of whether the land is used by the owner or by the tenant. Since land cannot take this rent itself, some one must take it for the land. Therefore the landlord receives the rent. If he uses the land himself, he receives it in the form of extra crops; if some one else uses it, he takes it in the form of money. When the owner and the user are two different persons, it may easily be seen that the payment of rent becomes more marked and more socially significant.

Since rent exists so generally and since it is paid so universally, one naturally asks, " How does rent arise and what reason is there for its payment? " To this question there is

**How rent arises:** a clear and definite answer. Rent arises because of differences in the productive capacity of various lands. This difference of productivity may be due to a difference in the fertility of the soil or to a difference in the location of the land.

First of all, picture in your mind two separate tracts of land, each an acre in size. Every spring the two farmers owning these tracts go out to plant their grain. They may use the same quality of fertilizer, the same kind of grain,

and the same kind of plow, and have the same efficiency in their labor force. In the fall, one farmer reaps twenty bushels; the other, fifteen. To what can we attribute this difference in yield of five bushels per acre? In all production there are three factors,— land, labor, and capital. On these two acres the capital and labor were, by assumption, respectively identical. This being the case, there remains but the third factor to which we can attribute this extra growth of five bushels. That is land. The extra return of five bushels is the income which we can attribute to the better acre because of its superiority over the poorer one. Such an increase is termed "rent." Thus, economic rent arises because "land" aids man unequally in production. In one place it yields fifteen bushels, in another twenty. This difference in the yield constitutes the rent.

*From differences of fertility.*

Again, let us picture to ourselves two retail stores of equal attractiveness so far as the building and goods are concerned, and each with equally efficient management. One is located on the outskirts or edge of the business district and the other is near the center of one of the busiest thoroughfares. At the end of the year, the net profit of the one store may be one thousand dollars, while the net profit of the other may be two thousand five hundred dollars. To what, then, must we attribute this difference in earning power amounting to fifteen hundred dollars per annum? The labor is equally efficient; the physical equipment of the stores is similar. The difference, then, can only be attributed to the third factor in production, namely, land. The income which we must attribute to this second store because of its superiority in location over the poorer we also call economic rent. In

*From differences of location.*

the first illustration, the superiority in fertility gives rise to rent, while in the second, the superiority in location has a like effect. Superiority may, of course, be the product of both fertility and of location, as in trucking land near great cities.

Rent, therefore, arises from differences in the value of land, and the rent of any piece of land is the difference between its yield or value and that of a particular piece of land taken as a basis of comparison.

**The Grades of Land.** — The center of every city is devoted to the purposes of business. Outside this district we find, roughly speaking, the circular belt of the residential district, which, though it has not quite the high social value of the business section, still plays an important part in the use that man makes of land. Then beyond the confines of the city is the land devoted to truck farming; still farther out lie lands devoted to general farming and to grazing.

**The usual grades.**

There may still be land lying beyond the grazing land which is least desirable for any of the uses to which man may put land, but which may serve to catch the overflow of population, or may be used by the less fortunate members of society who are willing to go on this poor outlying land and work there for a bare living. This last type of land has earned the name in economics of " no-rent " land, — a term which implies that a man working on such land will merely get enough from his labor to allow himself his daily wage and to pay for the few simple tools and seed that he may need in cultivating it. Its fertility is so low that, when a definite return from the land is set aside to pay the wages of labor and the interest on capital, there is nothing left for rent. Hence the expression " no-rent " land.

**" No-rent " land.**

Broadly speaking, that class of land which has the highest social value will yield the largest amount of rent, and, of each class, that land which is superior will yield the higher rent. Accordingly, all land used for business purposes yields a greater income than land used for residential purposes. This latter in turn yields more than land used for trucking, while trucking land yields more than land used for farming. Again, farming land is more valuable than land used for grazing, which, in its turn, brings in a higher return than " no-rent " land.

**Rent varies:** *Between grades.*

It is apparent, however, that though this general scheme of gradation of the size of rents holds good, there are many variations in rent, and no two pieces of land in the same belt pay the same amount of economic rent. Hence, we speak of the poorest land of each belt or class — the marginal land — as receiving a marginal rent. If we take this poorest land as our basis, better land in the same class must pay a higher rate due to its superiority. This additional rate is called the differential rent, so that in theory all land which is better, to however small a degree, than the poorest land pays a rent composed of these two elements, — a sum equal to the amount paid for the poorest land of its class, called marginal rent, and an additional sum proportionate to its superiority over that land, called differential rent. The two together equal the economic rent.

*Within a grade.*

To illustrate, one can imagine a piece of land just on the margin of the belt between general farming and trucking. It is the poorest land used for truck farming and yields a rent of twenty-five dollars an acre. Half a mile nearer the city there may be a second farm which, because of its superiority, will have to pay an additional sum of ten dollars,

making its full rent the sum of the marginal and differential rent, or thirty-five dollars. Still farther in toward the city we can conceive of the very best land used for this purpose lying adjacent to the suburban district. This farm, being near to the city markets, will have to pay an even greater differential rent, perhaps fifteen dollars, making in all a total rent of forty dollars.

If, now, we go even farther toward the city, we immediately pass into the next belt in our illustration, the residential. The poorest land used for this purpose gives us the new marginal rent for that belt. It is obvious, however, that the amount paid for the poorest or marginal land in this belt must be a little higher than that paid for the best land of the next lower or trucking belt. If this were not so, the land would be put to truck farming again, because it would yield by that method a larger return. As a result, we have this general principle running throughout all rents, the rent of the marginal land of the next higher belt is always a little greater than the rent of the marginal land of the next lower belt plus its greatest differential rent.

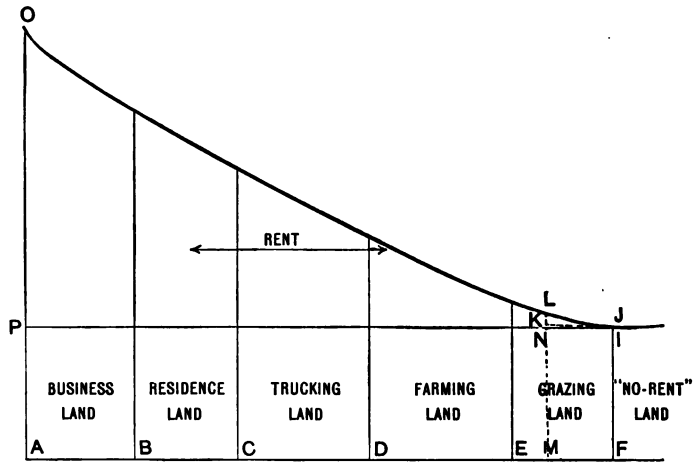
*The general principle.*

This entire theory of rent is usually illustrated by the diagram on page 271.

The horizontal base represents, of course, the lands themselves, while the vertical lines show their varying productivity. From this illustration we are enabled to see, not only the varying values of the different classes of lands, but also the varying values of different lands within the same class. For example, at one end of the horizontal base we have land $A$, the most productive land in the most valuable grade, with a productivity represented by $AO$, of which $PO$ is rent. At the other end

*Explanation of diagram.*

we have land $F$, the least productive land in the lowest rent-paying belt, with a productivity represented by $FJ$, of which $IJ$ is rent. This land $F$ is the marginal land of the lowest rent-paying class and its rent ($IJ$) is marginal rent. A little farther up in this grazing land, however, we find that land $M$ has a productivity of $ML$ and that, consequently it has a differential rent of $KL$ above the marginal rent of $F$.




Altogether this land $M$ has an economic rent of $NL$, which represents the sum of both the marginal and differential rent.

So far we have applied the law of rent to only one kind of "land," namely, the fields. It is, however, applicable to other forms of "land," such as mines and water power. For example, marginal water power would be the poorest kind of water power that could be profitably used for a certain purpose, as the running of a sawmill. A larger and stronger stream, capable of being used for the same purpose, would

yield a greater return of sawed lumber. This additional income would represent the differential rent. Were there a source of water power so strong that it would just pay for the machinery used in harnessing it and the labor needed in operating it, it would correspond to "no-rent" land and might well be called "no-rent" water power. Likewise, we can apply the same fundamental principle of economic rent to mines and other gifts of nature.

*Other applications of the law.*

According to these principles, land takes one great portion of the world's wealth in the form of rent. In any advanced civilization the share of distribution that goes to land in the form of rent is always increasing because the value of land is always rising. In young and newly settled countries, where natural resources are abundant and unappropriated, the amount of wealth that goes to land is correspondingly small. However, as population increases and resources are utilized, the landlord class must develop and appropriate a larger and larger share of wealth. In the United States, should the monopoly of natural resources go on unchecked, a great mass of wealth could not help but be diverted to the land-owning classes.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. With whose name is the theory of rent most closely associated?
2. Give local examples of a general rise of rent; the cause. Of a general fall of rent; the cause.
3. What is meant by the "law of diminishing returns" when applied to land?
4. Do the governments of other countries own land? Would it have been better for the United States to retain the ownership of its land instead of giving it away?

5. On what is rent based? Why would rent disappear if land were unlimited in amount and all of equal quality?

6. What is the effect upon rent of improvements in the field of production? Of consumption? Of transportation? What are the forces in society that tend to raise agricultural rents? Urban rents?

7. What would be the effect upon rent if new land were discovered? If a railroad opened up a new country?

8. Is the "rent" of a down-town New York office rent in the economic sense of the term?

9. Are tenants very likely to make permanent improvements upon rented land? Why?

10. What is the difference between economic rent and commercial or contract rent?

11. Can you give examples of a rise of commercial rent? Of a decrease? State the causes in each case.

12. Is the income yielded by permanent improvements on land rent, interest, or profits?

13. How has the advent of trolley cars and automobiles affected rent?

14. Do "High rents cause high agricultural prices" or do "High agricultural prices cause high rents"?

15. What case of unearned increment in land values can you cite?

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# CHAPTER XXXIV

## The Theory of Interest

I. Nature of interest
   1. Its meaning
   2. Some examples
   3. Why necessary:
      *a.* From the standpoint of saving
      *b.* From the standpoint of efficiency

II. What determines rate of interest
   1. Man's valuation of the future:
      *a.* Individual valuation
      *b.* Social valuation
      *c.* Why the rate is low or high
   2. Other considerations:
      *a.* Concerning supply of capital
      *b.* Concerning element of risk

III. Source of the interest fund
   1. The popular view
   2. The scientific view
   3. The summary

**Nature of Interest.** — Capital is also a factor in production, and the share assigned to it in the general distribution of wealth is called interest. In other words, interest is the return on capital and represents capital's reward for engaging in production. If an individual permits his wealth to be used as capital, instead of consuming it unproductively, he will receive this interest for its use. Returns on investments, therefore, whether

**Meaning and examples.**

received as interest on deposits, or interest on mortgages, or dividends on stock, are all forms of interest. Therefore, interest is the sum paid for the use of capital.

The first question that naturally arises in considering interest is this: Why should it be necessary to pay interest for the use of capital? Why should not capital be universally employed without receiving any interest? The answer to this question may be found in a characteristic of human nature. Interest is necessary because man undervalues the future and, consequently, capital would soon disappear were no interest paid for its use.

**Why necessary:**

This payment of interest for the use of capital is necessary no matter whether we regard saving or efficiency as the prime factor in creating capital. When we view capital from the standpoint of saving, the necessity for the payment of interest is quite apparent. Because man undervalues the future he overvalues the present. The present enjoyment of one thousand dollars means much more to an individual than a contemplation of its enjoyment a year from now. This is true because the future is so uncertain. Dishonesty, accident, fire, or death may intervene to prevent the actual enjoyment of this wealth in the future. Therefore, man prefers to consume and enjoy it now. But should an individual resist this tendency and thus abstain from present consumption, he would be obliged, while saving, to make sacrifices. As an inducement, therefore, for him to save and as a reward for these sacrifices, he is offered more future value for his present wealth. Instead of a thousand dollars to-day, he receives a thousand and fifty dollars next year. This difference of fifty dollars offsets his undervaluation of the future and is a sufficient inducement for him to save and

*From the standpoint of saving.*

create capital. If such a premium in the form of interest were not offered, few would make present sacrifices, wealth would be immediately consumed, and little capital would be created.

If we regard capital from the standpoint of efficiency, we find that the payment of interest is still necessary. When we regard capital as resulting from increased efficiency, rather than mere saving, interest must be paid, not as a reward for sacrifices, but as a means of preserving capital.

*From the standpoint of efficiency.*

For example, the millionaire's capital must be paid interest in order that it may be preserved. Man's undervaluation of the future still exists; and, should he not be offered a higher future value in order to offset this discount of the future, he would squander his wealth in present consumption. The spendthrift dissipates the fortune of his ancestors, and young men with large fortunes frequently enjoy the reputation of being "good spenders." While in these cases it would be an exaggeration to speak of interest as paid for rewarding sacrifices, it is equally evident that it must be paid for preserving capital. Should interest not be paid, the great accumulations of capital we now have would eventually be destroyed. Therefore, whether we regard capital as resulting from saving or from efficiency, the necessity for the payment of interest still exists.

**Rate of Interest.** — The next question that naturally arises is: What determines the rate of interest? From the previous discussion, it may readily be seen that this must likewise depend upon man's valuation of the future. Of course there is an individual and a social valuation. It need hardly be said that this latter is the determining factor in fixing the market rate of interest. If one individual values

the future highly, his individual rate of interest would be low. He would not need much future promise to induce him to invest his wealth in a productive enterprise. If, however, the community's valuation should be low, the market rate of interest would be high. To offset this low regard for the future, a great premium would have to be offered in order to induce the community to refrain from present consumption. Under these circumstances, a particular individual, having a high valuation of the future, would profit by the higher market rate of a community with a low valuation. In any given community, however, the market rate of interest will be low or high according as to whether men in general put a high or low estimate on future values. In older and more civilized countries, because man values the future highly, the rate of interest is lower than in younger and less civilized countries where the future is greatly discounted.

**Man's valuation of the future.**

It is likewise apparent that when the community as a whole places a high valuation on the future, many people will abstain from present consumption and devote a large proportion of their wealth to productive purposes. This will cause the supply of capital to be plentiful, while the rate of interest will be low. On the other hand, when people place a low estimate on the future they will consume freely in the present and so reduce the amount of wealth devoted to productive enterprise. This situation will cause capital to become scarce, while at the same time the rate of interest will be high. Thus there develops a certain relation between the supply of capital and the rate of interest. When the supply of capital is great as compared with the demand for it, the rate of interest will be low; and, conversely, when the demand for

**Other considerations: *Supply and demand.***

capital is great as compared with its supply, the rate of interest will be high.

*Element of risk.* Again, the element of risk is frequently spoken of in connection with interest. For example, it is often said that a high risk means a high rate of interest, and low risk a low rate of interest. This, however, is but another phase of man's valuation of the future. If an individual believes that the use to which his capital is put is accompanied by great risk, that is, if its future seems uncertain to him, he will demand a high rate of interest. The value of this wealth in the future looks so slight that a high rate of interest in the present is demanded. Generally speaking, however, the element of risk, to-day, is largely eliminated in the reckoning of pure interest. When, for example, money is deposited in a savings bank, there is practically no risk whatever involved in its investment.

**Source of the Interest Fund.** — There remains yet to be examined the source of the interest fund. Whence comes the fund from which interest is paid? We have just seen why it is necessary to pay interest and the factors involved in determining the rate of interest. But how does society secure the means with which to pay this sum necessary for the use of capital? Does capital get it by robbing labor? If so, labor is exploited by capital, and that which should go to the laborer in the form of wages the capitalist appropriates as interest. This view is popular with the laboring class. They are very willing to believe that the payment of interest deprives them of their full wages. Sometimes, too, there is little doubt but that this actually occurs. When large dividends are paid on "watered" stock and when, through monopoly,

**The popular view.**

an unfair advantage is taken of labor, there is every likelihood that interest is paid at the expense of wages.

As opposed to this popular belief, we have the scientific view that capital creates its own fund from which interest is paid just as labor produces the wealth from which wages is paid. Capital, to-day, plays as great and powerful a part in the productive process as the other requisites of production. Interest, then, may be paid without any infringement on the rights of labor from the extra fund of wealth that capital has created. If a merchant, for example, by making his store more attractive, that is, by adding to its capital and appointments, increases his business through the efficiency of capital, the extra return thus resulting furnishes the fund from which interest is paid. Thus, through increased output brought about by increased capital, interest is legitimately provided.

**The scientific view.**

This statement of the theory of interest brings forward its essential features. In the first place, the payment of interest for the use of capital is necessary, regardless of whether we consider saving or efficiency as the factor of prime importance in the development of capital. In the next place, the market rate of interest in any given community depends upon the social valuation of the future. Finally, the fund from which interest is paid is provided through the productive power of capital itself. Capital is thus entitled to its normal reward as much as is land or labor.

**The summary.**

## TOPICS FOR CLASS DISCUSSION

1. What is interest?
2. State in summary form the theory of interest.
3. Show in detail the services rendered to production by capital.
4. Can any part of the earnings of a bootblack be called interest?
5. When a company declares an unearned dividend, is the stockholder getting interest?
6. Can law fix the rate of interest at any desired point? Why?
7. Why does the rate of interest vary at the same time in different sections of the country? In different businesses?
8. The savings of the American people are nearly a billion dollars a year. What and where are they?
9. Is interest different from usury? If so, what is the difference?
10. Why has the rate of return on investments often been ten per cent in the West, seven per cent in the Central states, five per cent in New York, and four per cent in Germany?
11. It is said that interest is paid for capital, not for money. Is this true?
12. What is the effect on the rate of interest of a rising standard of living?

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# CHAPTER XXXV

## The Theory of Profits

I. Character of profits
   1. Meaning of profits:
      *a.* The ordinary meaning
      *b.* The economic meaning
   2. Nature of managing ability:
      *a.* Meaning of "entrepreneur"
      *b.* Requisites of managing ability
   3. Nature of profits:
      *a.* Relation between profits and wages
      *b.* Why the special term is used
      *c.* The diagram

II. Law of profits
   1. Grades of entrepreneurs:
      *a.* Those of phenomenal power
      *b.* Those of unusual ability
      *c.* Those of ordinary capacity
      *d.* Those of marginal ability
   2. Degrees of profits:
      *a.* How they are measured
      *b.* An example from the diagram
      *c.* What "no-profit" class receives
      *d.* The law summarized
   3. The conclusions:
      *a.* Importance of the entrepreneur
      *b.* Effect of monopoly power

**Character of Profits.** — We now come to an analysis of one of the shares in distribution that, up to this point, in

order to avoid confusion of thought, we have purposely refrained from discussing. This share is known as "profits." Like rent, the word "profits," as used in economics, has a meaning distinct from that usually attributed to it. In ordinary language the term "profits" is used to designate the total gains of a man in business, regardless of whether they represent rent or interest or wages. For example, a small trader may own his land and store, his capital, and contribute his own labor. At the end of a year his total gains may amount to one thousand dollars. These he considers as one, and calls the whole income profits. But, after our discussion of rent and interest, it will readily be seen that this loose phraseology would be very misleading to the economist. Therefore, in economics, profits is employed to mean but one thing, — the reward of managing ability. It is the return that the entrepreneur gets for his part in production, just as rent is the return on land, or interest the return on capital.

**Meaning of profits.**

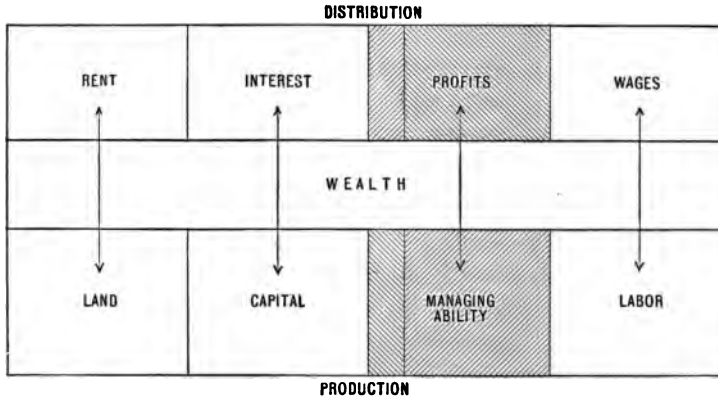
To understand more clearly the character of profits we must thoroughly comprehend the nature of managing ability which is the entrepreneur's distinctive characteristic. Already in a previous chapter we have referred to the entrepreneur as the industrial manager. Managing ability implies two things, (1) labor and (2) something to manage. Now, this something which is managed is of course capital. Consequently managing ability represents a united control of capital and labor. Skill, judgment, insight, efficiency, — all are required in managing ability. It is not necessary that the entrepreneur or manager own the capital which he manages, although it is perfectly possible for him to be the owner as well as the manager. However, to-day the industrial

**Nature of managing ability.**

manager is intrusted with the capital contributed by thousands of stockholders.

If, then, the entrepreneur represents a combination of capital and labor, profits, which is his reward, must represent the union of interest and wages. But in this union wages is by far the greater factor, because the entrepreneur is essentially a laborer. His profits are largely wages. This fact that wages constitutes the greater part of profits must always be borne in mind. The incomes of our American managers are made up largely of the return on their industrial effort. Since, however, it would be confusing to speak of the wages of a railroad organizer and of the wages of a bricklayer, we especially employ the term "profits" to represent the reward of the industrial manager. This complete differentiation of the entrepreneur, on the side of production, and of profits, on the side of distribution, may be represented by the following diagram:

**Nature of profits.**




In this diagram we notice that, instead of three, there are now four factors in production as well as four shares in

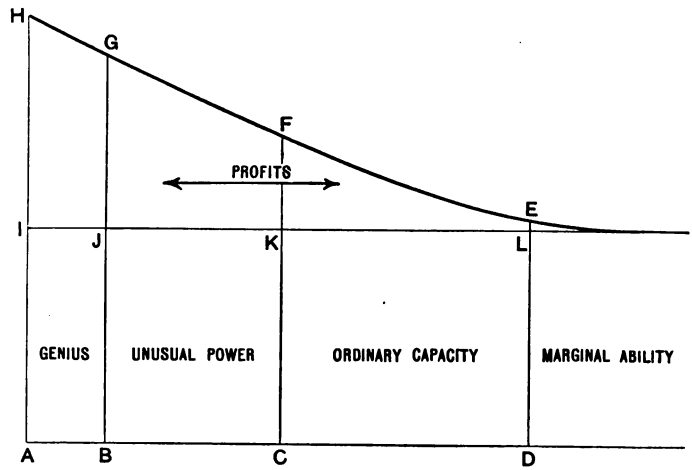
distribution. Managing ability has sprung from a union of capital and labor, while profits combines interest and wages. In these two new elements, — managing ability and profits, —.brought about by modern economic conditions, the relative importance of capital and interest on the one hand and of labor and wages on the other is shown by the cross-sectioned parts of the diagram. No attempt has been made, however, to show the relative importance of the different factors in production, or the relative size of the different shares in distribution.

**The Law of Profits.** — We are now ready to consider the question of how profits are determined. Why should the profits of one industrial manager differ from the profits of another? To answer this question we must first examine differences in managing ability upon which these profits depend.

While managing ability is of various kinds and degrees, entrepreneurs may, in general, be conveniently grouped into four classes. At the head of this group of industrial managers are those who possess phenomenal managing ability. They stand out in bold relief against the background of normal power in industrial management. Had a man of this phenomenal power in business a corresponding ability in art or literature, he would become as famous as Michael Angelo or Shakespeare. It is needless to say that the number of men in this class is extremely limited. Next to the men of phenomenal power come those of unusual managing ability. They are men of talent, but just fall short of possessing industrial genius. Next to these, come the men of ordinary capacity in industrial management. They are successful business men and are well known in their respective communities.

**Grades of entrepreneurs.**

The number of men in this class is quite large. Finally, in this general group of entrepreneurs, come the men of small managing ability. They are on the margin of business success and, as entrepreneurs, they make perhaps a little more profits than, as laborers, they would command wages. Therefore they hover about the margin of business independence,—sometimes venturing out for themselves, and, again, seeking employment under cover of some one's management. Under these conditions, therefore, they may be said to possess only marginal managing ability. These different grades of ability and the profits they respectively command may be represented by a diagram with the principle of which we are already familiar:




From this diagram it will be seen that the principle which determines degrees of profits is similar to that determining differences in rent. Just as we have different grades of land with varying productivity, so we have different classes of

entrepreneurs with varying capacity. As we measure rents on the basis of the return on "no-rent" land, so we measure profits on the basis of the return on the "no-profit" class of entrepreneurs. For example, the man *D*, in the diagram, has a return on his effort represented by the line *DE*. Of this return *DE*, *LE* represents profits and is known, in economics, as marginal profits. The man *A*, however, has a much larger return, represented by *AH*, of which *IH* is profits. In both cases the return of these men on their managing ability, that is, their profits, has been measured by using the return of the "no-profit" class with marginal ability as a common basis of comparison. It will be seen, therefore, that these men of marginal ability, used to represent the "no-profit" class of managers, serve the same purpose as the "no-rent" land in the theory of rent. It must be remembered, however, that this "no-profit" class, just like the "no-rent" land, has some return for its effort; but this return is just the return of ordinary labor. Therefore, the law of profits may be thus summarized: the profits of any given entrepreneur will be the difference between his return and the return of the "no-profit" class of entrepreneurs.

**Degrees of profits.**

We are now in a position to make a clear distinction between interest and profits. Formerly the capitalist and entrepreneur were thought of as one, and interest and profits were regarded as synonymous. To-day, however, they are being differentiated both in production and in distribution. In the past few decades, the industrial manager has assumed such great importance and has become so distinctive in character, that his part in production and his share in distribution merit separate consideration.

**The conclusions:** *Importance of entrepreneur.*

The monopoly power of the entrepreneur and its effect on prices have already been considered. Should this monopoly power increase and should prices continue to be forced above a competitive level, much of the income of society may be converted into the profits of the entrepreneur. There is little doubt that, to a certain extent, this has taken place; and that, should it continue, the share that goes to profits in the general distribution of wealth would grow at the expense of some other share in distribution.

*Effect of monopoly power.*

## TOPICS FOR CLASS DISCUSSION

1. What are the chief elements in business success?
2. Do unsuccessful employers pay less wages than those who make large profits?
3. What is the effect of competition on profits?
4. What devices do entrepreneurs sometimes employ to escape competition?
5. What do you think has been the basis of most of the more recently acquired large fortunes in this country?
6. The syndicate which underwrote the securities of the U. S. Steel Corporation is said to have made over $40,000,000. Was that profit? Do you think it was earned?
7. Are the profits of a business man a good measure of his service to society in the production of wealth?
8. Do profits tend to an equilibrium as between different individuals? Different occupations? Different places?
9. Is a restriction of profits ever justifiable?

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# CHAPTER XXXVI

## The Theory of Wages

I. Nature of wages
   1. Meaning of wages:
      *a.* Money wages
      *b.* Real wages
   2. Importance of money wages
   3. What the term includes

II. Groups of laborers
   1. Four main classes:
      *a.* The leaders
      *b.* The business and professional men
      *c.* The skilled laborers
      *d.* The unskilled workers

III. What determines group wages
   1. Productive power:
      *a.* Meaning of productivity
      *b.* Importance of this principle
   2. Monopoly power:
      *a.* Its meaning and use
      *b.* How wages vary with it
   3. Why group wages are stable:
      *a.* The progressive advance
      *b.* Children move up
   4. The conclusion.

**Nature of Wages.** — In the discussion of the distribution of wealth, the term " wages " is used to represent the share that labor receives for its part in production. The word is

so universally employed to designate this reward of labor that it is seldom one stops to consider the significance of the modern method of wage payment. Money, of course, is to-day the most usual form in which wages is paid. However, we have seen that money wages is not the same as real wages, which represents the purchasing power of the money. And, if there were no money, there would still be wages because labor would still produce and be entitled to a reward for its part in production. In this case, wages would be received in the form of actual products.

**Meaning of wages.**

But labor, to-day, is not paid in the form of actual products. Everywhere we find labor not receiving what it actually produces, but being paid in the form of money. Why, then, has it become necessary for society to adopt this uniform wage system for the payment of labor? The productive processes of modern society are highly complicated. There is no longer a simple, direct relation between labor and the materials of production; and, consequently, the laborer no longer receives the actual goods he creates. A great intermediate class, known as employers, has grown up in industrial society. This class owns the tools of production, offers the laborer employment, takes what he produces, and, in exchange, gives him, through a uniform wage system, a certain sum of money called wages. The payment of money wages, however, should not obscure the real relation between labor and the product it creates.

**Importance of money wages.**

Another important consideration to bear in mind in a discussion of the nature of wages is the inclusive character of the term. Not merely physical laborers receive wages. Since wages is the return for industrial effort, the term applies to the rewards of all forms of industrial activity, whether

mental or physical. We have seen that even profits, the return for managing ability, is a form of wages because the manager is essentially a laborer. At the same time, the office boy receives wages in return for his labor. In fact, in the United States, practically all of those gainfully employed are working for wages, so that the population of the United States may well be described as a " wage-earning " group.

**What the term includes.**

**Groups of Laborers.** — Since wages include the incomes of so many different laborers, it is necessary to classify these laborers in order to understand the reasons for the differences in the wages they receive. In the first class are the leaders, — those men of such phenomenal power that they attract attention everywhere. While they are not necessarily confined to the class of industrial entrepreneurs, it is here that they are chiefly found. Next to these, come the large body of successful business and professional men who stand out prominently in every community. Physicians, lawyers, and educators, as well as merchants and engineers, may be included in this group. The next class of laborers is made up of the great mass of skilled workers that have received some form of special training. Not only mechanics but also trained clerks and bookkeepers are members of this class. Finally, there is the horde of unskilled workers that range all the way from the house-to-house canvasser to the immigrant street cleaner. These last two classes merge imperceptibly into each other, and the laborers forming the connecting link are often spoken of as semi-skilled workers.

**Four main classes.**

These different classes of laborers naturally increase in number, but decrease in importance, as they go downward from one group to another.

**What determines Group Wages.** — At the outset, it will be noticed that the wages of group (1), the leaders, will be as great as their number is small, and that the wages of group (4), the unskilled workers, will be as small as their number is great. Consequently, many writers have taken the position that wages depend upon the relation between the supply of labor and the demand for it. But this explanation of wages does not reach the heart of the problem. Why should the supply of certain kinds of labor be small, and why should the demand for them be great? The answer to this question will give the fundamental reason why wages vary.

**Depends on productive power:**

In the first place, it is evident that men of high productive capacity can command high wages. This kind of labor is in demand because its productive power is great and its supply is limited. The principle of productivity in this case plays the dominant part in determining the wages that such a group of men receives. By productivity is meant the creative power which individuals possess in varying degrees and whereby they are able, either directly or indirectly, to produce material wealth. On all sides there are evidences of this kind of capacity.

***Meaning of productivity.***

Throughout the whole theory of wages, this principle of productivity must be constantly kept in mind. In fact, it forms the foundation of the general theory of distribution. Not only labor, but also capital, depends upon productive power as a basis upon which each may claim a share in the distribution of wealth. As Professor H. R. Seager points out, "the law which determines the division of the product between labor and capital in competitive industries for a society in a state of

***Importance of this principle.***

normal equilibrium is that each receives the share that it produces." If labor did not produce anything, it would not be entitled to anything. The principle of productivity thus gives rise to the idea of merit, and man feels that he is receiving what he deserves. Labor is entitled to wages because it has played a vital part in producing wealth. But to-day, in the absence of a purely competitive régime, does labor receive exactly what it produces? Does the principle of productivity, and this principle alone, determine under present conditions the wages of a group of laborers? While, for example, it is true that men of great productive power command large wages, yet it seems equally obvious that men sometimes receive more or less wages than their capacities warrant.

**Depends on monopoly power:** *Its meaning and use.*

The wages of any class of labor seems to depend not only upon its productive power but also upon its monopoly power. The more monopoly power a group has the higher will be its wages. Monopoly power has already been defined as some unusual power that enables the holder to fix a price above the competitive figure. It is frequently exercised by the entrepreneur when he controls prices without regard to the laws of competition. This unusual power may also be exercised in behalf of labor either individually or collectively. Either by acquiring some special ability, or by securing power through organization, a laboring class may regulate the price of its labor and command its wages without any absolute regard to the actual value of the product. In both cases, through an unusual control over labor resources, monopoly power, in addition to productive power, determines the wages paid to labor.

This dependence of wages on labor's monopoly power is

seen when we examine the monopoly power of each class of laborers. Enough has been said of the great monopoly power of the leaders in industry and of its effect on their income through the control of prices. At the other extreme we have the class of unskilled labor with minimum wages and practically no monopoly power, that is, no unusual power to control wages. Because of this absence of monopoly power, the cost of subsistence is practically the only determinant of wages for this group of laborers. Above them, the skilled laborers are much better off, because their monopoly power is increased both by individual skill and by group organization. The group of successful business and professional men have still greater monopoly power (secured largely through individual effort) and therefore command still higher wages. Thus it may be seen that in all these cases group wages vary not only with productive power, but also with monopoly power. This principle determining group wages applies likewise to individual wages.

*How wages vary with monopoly power.*

In a discussion of group wages there is another question that naturally arises. Why are group wages more or less stable? That is, why does the wage of the unskilled laborer remain approximately at ten dollars per week and that of the skilled worker at twenty dollars per week? The answer to this question is clear. The progressive members of one group advance to the next higher, thus relieving an undue pressure of numbers in the group below. For example, the great influx of immigrants, who have joined the ranks of unskilled labor in this country, has forced the American unskilled worker to seek some special training fitting him for more skilled labor. His standard of living will not submit to the low wage that for-

**Why group wages are stable.**

eign labor accepts. Thus the progressive who move up make way for the newer ones who come in. At the same time, the children of skilled and unskilled laborers, who are dissatisfied with the economic position of their parents, frequently move up to the class of business or professional men. This general advance, therefore, from one group to another, brought about by the movement of the more progressive and younger elements, results in a general mobility of labor whereby overcrowding in one group is minimized and the wages of the various groups remain more or less stationary.

From this presentation of the theory of wages, it will be observed that two factors — productivity and monopoly power — are of prime importance in determining the wages of a given group or of a particular individual. If it were not for productivity, there would be no wages, and if it were not for monopoly power, wages would not be what they actually are. Under ideal conditions of pure competition the productivity principle would be sufficient to explain wages in any given case. Each individual would receive as wages that which, in competition with others, he produced. But when competition is checked, as to-day it actually is, the amount of wages that a group or an individual can command depends almost as much upon his monopoly power, that is, his unusual power to control the price of labor, as upon his productive power, that is, the wealth he actually produces.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. What was the wage fund theory?
2. What was the "Iron Law of Wages"?
3. Who was Malthus? What did he teach?
4. What interest have the rich in an abundance of labor?
5. What is meant by the "sweating system"?
6. What is the effect of free public schools on the comparative wages of skilled and unskilled laborers?
7. Speaking generally, does the laborer gain or lose by working under conditions of abundance of land and capital?
8. If a factory town is destroyed by fire, will wages throughout the country at large rise or fall?
9. Make a list of the factors affecting the demand for street cleaners in Chicago; a physician in a small town; a barber.
10. What would you have to pay a cook in an Alaskan gold-mining camp?
11. In your own individual case, what do you think will determine your wages in after life?

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## CHAPTER XXXVII

### The Outlook for Distribution

I. Labor's monopoly power
   1. Individual monopoly power:
      *a.* Acquired capacity
      *b.* Inherited capacity
   2. Group monopoly power:
      *a.* Its meaning
      *b.* An example
      *c.* Where it is developed
      *d.* How it may be exercised
   3. The outlook in the United States

II. Labor's power of substitution
   1. From standpoint of consumption:
      *a.* Meaning and examples
      *b.* The consequence
   2. From standpoint of production:
      *a.* Meaning of mobility of labor
      *b.* Examples of this mobility
   3. Double effect of this power on labor:
      *a.* As producer
      *b.* As consumer

III. Relative rates of increase of the factors in production
   1. Importance of rate of increase
   2. Conditions in the United States:
      *a.* In regard to capital
      *b.* In regard to land
      *c.* In regard to labor
      *d.* How labor profits
   3. General conclusion

In concluding a discussion of the theory of distribution, it is important to understand the probability of the different shares of wealth increasing or diminishing. From the standpoint of individual welfare, the future of labor is especially significant because the great mass of people depend altogether upon wages for their support and material happiness. In determining what chance labor has of increasing its share in the general distribution of wealth, it will be found that much will depend (1) upon the growth of labor's monopoly power, (2) upon the exercise of its power of substitution, and (3) upon its rate of increase as compared with that of the other factors in production.

**Labor's Monopoly Power.** — In the lowest group of laborers we have seen that there is practically no monopoly power and that competition fixes the wage almost at the minimum of subsistence. In all the other groups, however, monopoly power plays a great part in determining the upper limit of wages and is manifesting itself in an increasing number of directions. The monopoly power of the laborer may be exercised either individually or collectively. The individual may possess this unusual control over labor either as a result of special training, or by reason of some inherited tendency that has been developed and cultivated. For example, the man who has made a particular study of the textile business at home and abroad, and who has also made a close study of business detail and knows how to manage large numbers of men, possesses by reason of his training a great monopoly power. This power enables him to command a salary of perhaps ten thousand dollars a year. In a similar manner the man who, through inherited ability and some special training, is able to draw striking cartoons and caricatures enjoys such a

**Individual monopoly power.**

great monopoly power that he may be able to command a salary of twenty thousand dollars a year. The monopoly power of the cartoonist was inherited, while that of the manager was acquired; in both cases, however, it was individual.

Group monopoly power, on the other hand, is of quite a different character. In this case labor relies for its control over wages not on great individual power, but on collective action. Group monopoly is the power whereby a group, through organization, is able to control the price of labor and to regulate its own wages. For example, suppose thirty hodcarriers are working for one dollar and seventy-five cents a day; and suppose further that there are no other hodcarriers near by, and that there is plenty of construction work in the neighborhood. It occurs to these men that if they unite together and demand two dollars a day, they will be able to increase their wages. This they do and, by their organization, create a monopoly power which enables them to secure the additional wage demanded. Among skilled laborers the monopoly power of organization is everywhere in evidence and competition plays a secondary part in determining wages. This monopoly power may be exercised not only through the union and strike method, but also through minimum wage laws such as exist in Australia and New Zealand.

**Group monopoly power.**

In America there are many evidences of the monopoly power of labor. From the standpoint of individual monopoly, the emphasis on education and special training is a most hopeful indication for the future of labor. Everywhere the necessity for increased efficiency is being pointed out and the means of securing it provided. At the same time, the monopoly

**The outlook in United States.**

of organization is becoming more and more powerful. Men are beginning to realize how much more can be accomplished by collective than by individual action. Thus, through the increase both of individual and group monopoly, labor possesses a means of enlarging its share of wages.

**Labor's Power of Substitution.** — Another advantage that labor enjoys is found in the exercise of its power of substitution. This power is simply the ability of labor to substitute one good for another, or one employer for another. For example, when the price of oil becomes too high, gas or electricity may be substituted. If the price of soap is raised, a washing powder may be used. When meat rises to a prohibitive figure, some other form of proteid diet will take its place. In this manner, by substituting one product for another, the consumer escapes the extortion of the monopolist, and labor, by forcing prices down, gets the benefit of income that would otherwise go to the monopolist in the form of monopoly prices. Labor's real wages ~~is~~ are increased.

**From standpoint of consumption.**

Again, by reason of its mobility and monopoly power, labor may substitute one employer for another. By mobility of labor is meant the freedom with which labor moves from one place to another and from one employer to another. In the days of feudalism, the serf was attached to the soil and was prevented from moving from place to place. The peasant was born an agricultural worker on a great estate and there he was obliged to live and die. To-day, however, in the United States, a laborer moves easily from place to place, and frequently from one occupation to another. If he is dissatisfied with conditions in one city or in one occupation, he seeks employment in another offering him a larger return.

**From standpoint of production.**

An advancing standard of living always impels labor to seek that industry or locality where it will receive its greatest reward. The labor union, through its monopoly of organization, makes secure this higher standard of living when it is once attained. This mobility of labor naturally results in more or less uniformity of wages within the same general group of laborers; but, nevertheless, there is just enough difference in wages to cause labor to substitute one employer for another. This power of substitution may be used against the employer and in favor of labor because, by reason of the growth of labor organization, the employer himself cannot substitute, as freely as in former days, one laborer for another. As a producer, therefore, labor may use the power of substitution, in conjunction with its monopoly power, to regulate its own wages; while, as a consumer, labor may use this same power to increase its income by preventing the entrepreneur from fixing prices at the monopoly point in order to swell his own profits.

**Double effect of this power on labor.**

**Relative Rates of Increase of the Factors in Production.** — Still another element favorable to the increase of wages is found in the relatively slow rate at which labor increases when compared with the other factors in production. In order that the wages of labor may increase, the value of its share in the general distribution of wealth must, of course, become greater. Now, as Professor S. N. Patten has shown, the value of the share of any factor in production, — whether land, labor, or capital, — depends, so far as these factors alone are concerned, upon its rate of increase as compared with that of the other factors in production. Scarcity plays an important part in determining the value of labor just as it does in determining

**Importance of rate of increase.**

the value of gold or silver. If gold, for example, is scarce, its value will be great; while if plentiful, its value will decrease. Just so it is with labor. If labor increases at a relatively slow rate, its value as measured in wages will be great; while if its rate of increase is relatively rapid, its value will decrease.

Now, in the United States, during the past century, there is little doubt concerning the relative rates of increase of land, labor, and capital. Capital has increased so enormously that the rate of interest has steadily declined. Through wonderful improvements in agriculture, land has likewise yielded a greater and greater return. However, labor, the remaining factor in production, has increased at a rate which is slow when compared with capital's rate of increase or land's rate of increase. To-day, evidence of labor's slow rate of increase is frequently found in utterances against "race suicide." Therefore, since labor's rate of increase has been slower than that of capital or land, it is fair to conclude that its share of wealth has increased at a proportionally greater rate than that of capital or land. From this point of view, therefore, labor may be said, broadly speaking, to have received the greatest benefits from production.

**Conditions in United States.**

Briefly the problem of distribution may be thus summarized: Rent is paid to the landlord because of his control over natural resources. Interest goes to the capitalist in return for the use of capital in industry. Profits is paid to the entrepreneur because of his special ability and the risks he undertakes. Wages, finally, is paid to the laborer in return for industrial effort and in proportion to his productive and monopoly power. But, while all these shares are thus divided up in

**General conclusion.**

theory, they are not always so separately distributed in practice. One individual, by representing several factors in production, may receive several shares in distribution, while another individual may receive but one share. In America, this may be slowly taking place. Broadly speaking, the laborer usually receives only one of these shares — wages — while the entrepreneur frequently takes the rest. As American society evolves, the landlord controlling natural resources, the factory owner controlling capital, the entrepreneur taking risks, and the monopolist controlling prices, all tend to become the same person. Through large scale production, one business interest may control all the important processes of industry from the raw to the finished product, and take into one treasury the different incomes from several distributive channels.

## TOPICS FOR CLASS DISCUSSION

1. What reasons can you offer to explain why the wages of women are generally lower than the wages of men?
2. What conditions fix the maximum and minimum limits to the rate of wages in a particular case?
3. What connection is there between the American rate of wages and American labor-saving devices?
4. By what methods is labor increasing its monopoly power?
5. Name the factors in modern society which increase the mobility of labor.
6. What effect should the increased mobility of labor have on wages in different sections of the same country?
7. Ordinarily an increased demand for a commodity which is not absolutely limited in amount will result in an increased supply. To what extent would this be true of laborers? Of labor?
8. Cite cases of monopolistic limitation of the supply of labor.
9. Explain the operation of the power of substitution.
10. What factors limit the power of the entrepreneur to fix wages?

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# PART VI

# ECONOMIC EXPERIMENTS AND PROGRAMS

## CHAPTER XXXVIII

### EXPERIMENTS OF THE EMPLOYER

I. Profit sharing
   1. Its meaning
   2. Its different forms
   3. Experiments in the United States:
      *a.* Some examples
      *b.* Causes of failure:
         (1) Mobility of labor
         (2) Number of unskilled workers
         (3) Lack of means

II. Welfare work
   1. Its meaning
   2. Its origin
   3. Recent improvements:
      *a.* In factories
      *b.* In stores and railways
   4. Its future

III. Philanthropic work
   1. Its chief problems:
      *a.* Relief of poverty
      *b.* Maintenance of unfortunates
      *c.* Prevention of distress
   2. Its legislative program:
      *a.* Improved working conditions
      *b.* Better living conditions

*c.* Purer diet
*d.* More recreation facilities
*e.* Practical education
3. The conclusion

A study of economics would not be complete without a discussion of the leading economic experiments and programs that have, as their common purpose, the improvement and betterment of the life of the individual and of the community.

**Profit Sharing.** — This attempt to improve the condition of the laborer originates with the employer either from a sense of duty or because he believes he will himself be the ultimate gainer by this policy. The system of profit sharing guarantees the worker, in addition to regular wages, a specified share of the profits of the business. In other words, it presupposes the payment of wages, and then shares the net profits with the workers in a certain predetermined proportion, — the employer voluntarily giving up part of his profits in order that the laborers under him may participate in their enjoyment. The simplicity of profit sharing is greatly in its favor. **Its meaning.**

Profit sharing usually takes one of the three following forms: (1) the employee participates in the ownership of the stock; (2) the employee (chiefly in England and the United States) is given a cash bonus in proportion to his wages and year's labor; (3) the employee enjoys a system of deferred participation in profits. Under this last-named system each year a percentage of the profits is credited either to the entire body of employees or to specific employees. In cases where the percentage is credited to employees as a unit, profit sharing takes the form of a provident fund. In order to share in this fund, **Its different forms.**

the employee must be sick, injured, or in some other condition of need. In cases where profits are credited to employees individually, each receives his share either when he attains a specified age, or when he has remained a certain time in the establishment, or when he suffers an unusual pressure from sickness or accident. This system, extensively employed in France, has received little encouragement in English-speaking countries.

While profit sharing has met with a measure of success in Europe, it is not looked upon with general favor in the United States. The A. S. Cameron Company of Jersey City operated a fairly successful profit sharing scheme beginning in 1869 and lasting until the death of Mr. Cameron. A similar experiment of the Brewster Carriage Company of New York inaugurated in 1870 was abandoned in 1872 when the workmen "struck" for an eight-hour day.

**Experiments in United States:**

There is only one instance of a profit sharing scheme surviving any considerable length of time in the United States — that of the Peacedale Manufacturing Company, whose successful organization of profit sharing dates from 1878. This plan is not a full-fledged system of profit sharing. No set proportion of net profits is paid, nor is there any obligation on the part of the firm to pay any bonus. During some years, however, as much as five per cent on the wages has been paid. In other years, when the business conditions did not seem to warrant it, nothing has been granted. The N. O. Nelson Company, manufacturers of plumbing goods, pays its employees a bonus in stock. On the whole, the American experiments have been on a small scale, few in number, and in only a few cases have they adopted a true profit sharing system.

*Some examples.*

The failure of profit sharing in the United States may be variously explained. To begin with, from an American standpoint, the system of sharing profits through deferred payments has an obvious disadvantage. It implies that a given employee will remain under one employer for a long period of time. In America, we have seen that this is frequently not the case. Labor is mobile, moving from place to place and from occupation to occupation. This mobility of labor is one of the means employed for its betterment. Seldom do men remain twenty years under one employer. A system of deferred payments, however, works on the principle that men will devote their whole lives to one employer. *Causes of failure.*

Again, this system works best in trades where workmen are highly skilled and intelligent. In the average American industry a common labor group is coming more and more rapidly to the front. This group works with its hands and neglects its head. The deferred payment system would not appeal strongly to its members. At best, business is uncertain; and the average employee does not relish the idea of working on the deferred payment plan for a firm which may become insolvent at any time and in this manner deprive him of the chance to share in the fund of profits.

The system of sharing profits with employees by means of shares, and by requiring them to be owners of the company's stock before they are allowed to share in the profits, has some serious drawbacks. The latter plan, particularly, is well-nigh out of the question for the lower grade of wageworker who has a family dependent on him. He needs every penny, and it is difficult for him to secure the funds to purchase the stock. If, however, he does

succeed in participating in stock benefits, his interest will naturally be centered in that particular business so that his freedom of action is curtailed. In fact, this whole system of profit sharing is paternalistic and opposed to the character of the American workman.

**Welfare Work.** — Another economic experiment, much less fundamental though far more common than profit sharing, is welfare work. This is defined by Professor John R. Commons as "all of those services which an employer may render to his work people over and above the payment of wages." Employers have always done some welfare work, but until recently such efforts were practically unknown to the general public.

**Its meaning.**

With the advent of the National Cash Register Company, however, and its attempts to provide abundantly for the outside wants of its employees, attention was widely attracted to the good results of welfare work. This company, employing many skilled and highly efficient men and women in the manufacture of a very complicated machine, decided that it would be advisable to adopt every means to develop their interest in the company and to make more efficient workers out of them. In order to carry out this design, sanitation was bettered and factory conditions were improved in many directions.

**Its origin.**

Within the past few years, factory construction has been revolutionized. The old style factory was a building. The new style factory is a factory, planned to serve that definite purpose. When the old factories were built, men wanted a building in which their employees could congregate and work. The progressive modern manufacturer builds a structure calculated to fit the peculiar needs of his business and, in addition, makes

**Recent improvements:** *In factories.*

every provision for the health and safety of his employees. In pursuance of this idea, he provides sanitary and comfortable houses, kindergartens, schoolhouses, amusement halls, churches, insurance funds, coöperative stores, and means of recreation after factory hours.

*In stores and railways.*

The factory does not furnish the only instance of welfare work. The modern department store is adopting rest rooms and improved lavatories; and providing schools, reading clubs, military organizations, singing societies, and many other forms of social gatherings for the benefit of the employees. The railroads, too, have done much good by providing "bunk" houses for employees when they are at the end of "runs" and away from home. The men under such circumstances often have no convenient place to go. The railroad, by furnishing sleeping rooms, amusement rooms, books, and other attractions, thus provides for the material comfort and welfare of its employees.

**Its future.**

Undoubtedly the greater part of welfare work is carried on for purely business reasons. Employers have found that it pays. Some men, however, who enjoy very great advantages, are able to carry on welfare work among their employees with a philanthropic end in view. But for the great majority of employers this is impossible. The feeling in favor of welfare work is undoubtedly spreading and, whatever one may think of the objects underlying its establishment, its results are certainly advantageous to both parties. Like profit sharing, welfare work depends upon the employer for its initiation and success. But unlike profit sharing, welfare work has taken a strong hold in the United States, and constitutes one of the modern divisions of great industrial undertakings.

Its success rests primarily upon the fact that it is regarded, not as philanthropy, but as a means of increasing efficiency.

**Philanthropic Work.** — Closely connected with employers' experiments in behalf of labor are the efforts of philanthropists and social workers to improve the condition of unfortunate members of society. While the philanthropist is not necessarily an employer, yet his fundamental interest in social and individual welfare merits careful consideration in a study of the attempts to better the condition of the great mass of laboring people. His work resembles that of the employer in that it is a form of outside assistance rendered to those in need of unusual help. The problems of philanthropy are usually concerned with (1) the relief of poverty, (2) the maintenance of unfortunates, and (3) the prevention of distress.

**Its problems:**

Relief of poverty is the ordinarily accepted duty of philanthropy. The soup kitchen, the bread line, the charity society, — feeding the hungry, clothing the needy, and giving aid to social outcasts, — are looked upon as legitimate forms of philanthropic activity. Such matters, however, occupy but a comparatively small part of the attention of modern philanthropists. Some immediate aid is given to the needy, but the aim of philanthropy is the elimination of the causes which produce the needy. This kind of relief is secured not so much through the almshouse as through the hospital, the sanitarium, and similar institutions. The relief afforded in this manner has been very great. In fact, curative work in hospitals and sanitariums has become so extensive and effective of late years that the ravages of many diseases, like tuberculosis, have been greatly reduced.

*Relief of poverty.*

Social unfortunates are usually classed as defectives or de-

pendents. The problem of maintaining defectives, — feeble-minded, epileptics, and those afflicted with incurable diseases, — is essentially one of segregation. It is of prime importance that such persons be kept away from their fellow-men. This is necessary either to prevent contagion, or to stop transmission, or to prevent the burden of support from falling on those incapable of bearing it. Therefore, philanthropy aims to provide institutions for the care of these persons. Dependents, on the other hand, need more or less temporary support. Usually they are children or old persons, and therefore their period of dependence cannot continue for any great length of time. They are cared for either because they have a career of work before them or one behind them.

*Maintenance of unfortunates.*

The philanthropy of most value to society, however, is that which concerns itself with the prevention of dependency, defectiveness, and delinquency. Why is this family unable to live decently? Because the father never learned to work efficiently. Then let society prevent the reappearance of such a family by educating this man's sons to be efficient workers. Why is this child feeble-minded? Because its ancestors have been feeble-minded for generations. Then it is high time that some steps be taken to stop the transmission of such a defect in this family. Here is a boy who has been committed to jail for stealing. He has never been well fed; he has played truant for years; his home is in a filthy alley; and he has never known the meaning of decent living conditions. Surely some steps should be taken to prevent the recurrence of such a disastrous life. Constructive philanthropy, therefore, undertakes the solution of these problems and,

*Prevention of distress.*

by prevention, aims to secure permanent improvement in social conditions.

While these are the problems in which philanthropy is primarily interested, what are the means it employs for their effective solution? It is evident that individual effort is not sufficient to accomplish the results desired by the philanthropist and social worker. How can a single individual, even with fabulous wealth, relieve poverty, maintain unfortunates, and prevent distress? Evidently he must rely upon the help of society. This help he secures in the form of social legislation. The lawmaker aids the social worker to attain his ideals. Thus philanthropy attempts to improve undesirable social conditions by securing legislation dealing with (1) working conditions, (2) living conditions, (3) purity of food and drink, (4) recreation, and (5) education.

**Its legislative program:**

In America, legislation concerning working conditions has confined itself largely to the passage of laws regulating the labor of children, the hours and working conditions of women, and the safety of workers. Under the American system of government, the adult male worker is frequently denied legislative protection on the ground that he is free to contract as he pleases. After a laborer once chooses to work in a dangerous or unhealthful trade, he takes upon himself the responsibility for any danger that may attach to the trade. Certain exceptions, however, have been made to this general rule. For example, government work is generally done under the eight-hour system. Again, the Utah eight-hour law decision handed down by the United States Supreme Court establishes the principle that in the exercise of the police power, under which the government protects the health and

*Improved working conditions.*

morals of the people, the hours of work may be limited in trades where long hours would injure health.

Living conditions in the United States have, in the past two decades, aroused considerable attention among philanthropists and social workers. This is particularly true of New York City, where six- and seven-story tenement houses create a congestion problem of the most acute type. But, while insanitary living is primarily a problem of the immigrant, the recent investigations in Pittsburg have shown clearly enough that Americans as well as foreigners are living in unhealthful surroundings. The most casual observer of living conditions in certain districts of great cities must conclude that efficiency cannot be maintained until some effective effort is made to improve housing conditions. Such efforts are being made in all of the larger American cities and, in some of them, with considerable effect.

*Better living conditions.*

The federal Pure Food and Drugs Act has put a very effective check upon the adulteration of food and drink. Up to the time of the passage of this act adulteration had been widespread but, with its passage, has come a complete revolution in the attitude, not only of the public, but also of the manufacturer, toward food adulteration. Instead of trying to avoid the law, the progressive manufacturers have prominently advertised the fact that they conform to all its provisions. Thus the manufacturers themselves have made the law effective.

*Purer diet.*

In providing means for play, Chicago leads all American cities. Other large cities have likewise provided playgrounds, school gardens, parks, and recreation piers, on the supposition that the juvenile court can be replaced most effectively by more recreation facilities.

*More recreation.*

After all, however, the philanthropist must do his most lasting work along educational lines. No reform can be effective which is not based upon education. Hence the advocates of social legislation are devoting their efforts to the upbuilding of schools, newspapers, magazines, theaters, and other agencies which affect the public mind. Obviously the most fundamental work in this direction must be done through the public school system. Great improvements in social conditions must necessarily follow the development of a progressive type of public education.

*Practical education.*

These various experiments to help labor and to improve social conditions are alike in certain fundamental respects. The employer sharing his profits with the laborer; the factory owner improving the conditions under which men and women work; and the philanthropist securing social legislation favorable to the worker, — all have the same end in view, the ideal of individual and social welfare. There is also a general uniformity in the character of the help extended to society by these different agencies. It is always in the form of outside assistance. It springs, not from labor itself, but from sources outside of labor. There are, however, various ways in which labor may help itself.

**The conclusion.**

## TOPICS FOR CLASS DISCUSSION

1. What are the different methods of sharing profits?
2. Which of these is the most successful?
3. What has been the success of profit sharing in the United States?
4. What is the attitude of the average employer toward profit sharing?
5. What attitude does the public take toward profit sharing?

6. What is the outlook for profit sharing in the United States?

7. Do you expect profit sharing to become general in the United States?

8. Have you any criticism against the principle of profit sharing?

9. What is welfare work?

10. Investigate the systems of welfare work which have been adopted by local employers. What are their strong points? Their weaknesses?

11. If you were managing a department store, what welfare measures would you adopt?

12. What future has welfare work?

13. What is the scope of philanthropic work?

14. What has philanthropy accomplished?

15. What is its future?

16. Can you make any general observations concerning the likenesses of these experiments of the employer? The differences?

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## CHAPTER XXXIX

### Experiments of the Worker

I. Experiments in coöperation
   1. Its usual forms:
      *a.* Coöperative banking
      *b.* Coöperative consumption:
         (1) Its English origin
         (2) Its American development
         (3) Its advantages
         (4) Why it has failed
      *c.* Coöperative production
   2. Outlook for coöperation

II. Modern unionism
   1. Character of unionism:
      *a.* Its significance
      *b.* Its national character
      *c.* Its industrial character
   2. Program of unionism:
      *a.* Higher wages
      *b.* Shorter hours:
         (1) American conditions
         (2) Reasons for shorter hours
      *c.* Better working conditions
   3. Weapons of unionism:
      *a.* The trade agreement
      *b.* The strike:
         (1) Effects on labor
         (2) Effects on employer
         (3) Effects on the public
      *c.* The boycott:
         (1) Its meaning
         (2) Its different forms
   4. Outlook for unionism

**Experiments in Coöperation.** — The worker himself has made frequent efforts to improve his own condition. The American's spirit of independence has manifested itself in initiating various experiments for his own betterment without depending upon help received from the employer or from the public. One attempt in this direction has been in the form of coöperation. From this standpoint, coöperation means the association of persons for the purpose of joint economic effort. Coöperative enterprises usually assume one of three forms, (1) coöperative banking, (2) coöperative consumption, and (3) coöperative production.

**Its usual forms:**

Coöperative banking is an attempt to secure certain financial benefits through associations of individuals in the form of insurance companies, or building societies, or fraternal organizations. From the organization of the first Mutual Fire Insurance Association in 1752, the growth of this kind of coöperation has been rapid in the United States. To-day it is everywhere prevalent in the form of assurance societies, building associations, lodges, and fraternal societies. The chief purpose of such latter organizations is, of course, to pay certain benefits in case of death, accident, and sickness.

*Coöperative banking.*

Coöperation in consumption is the association of individuals for the purpose of securing certain advantages in the purchase of goods. The coöperative store is a good example of this kind of coöperation. This economic experiment had its origin in England among a few poor weavers of Rochdale, who contributed to the purchase of a bag of flour. By this means, retail quantities of flour were secured at wholesale prices. From this small beginning the coöperative movement in England has

*Coöperative consumption.*

grown until, to-day, it numbers its members by hundreds of thousands. In memory of its originators, the coöperative society in charge of the system is called the " Rochdale Pioneers."

In America, however, this movement of coöperative consumption has never attained a like development. The numerous experiments have usually failed to attain any great success. For example, in 1845, the first protective union store was organized in Boston. A dozen persons with " the faith of God in their hearts " purchased a box of soap and half a box of tea. From this small beginning grew the New England Protective Union, which rapidly developed into a large organization with four hundred branches. However, dissensions crept into the ranks and, within a few years, the association was practically defunct. Similarly, the " Sovereigns of Industry," which like the " Patrons of Husbandry " grew to great proportions, made repeated but unsuccessful attempts to adopt the Rochdale system at its local centers. Finally, the " Knights of Labor " took the field and declared for coöperative institutions. However, little of a definite character was actually accomplished, and the order declined without having greatly advanced the cause of coöperation.

The advantages of consumers' coöperation are quite evident. In the first place, the small trader being eliminated, his profits are deducted from the price of commodities. By wholesale buying, a member of the coöperating group is able to secure his goods at a much reduced price, or to share in a common surplus at the end of the year. Then, again, through a knowledge of consumers' needs, and through saving in advertising, the expenses of operation are considerably reduced. It is also apparent that the stores will

be managed, not for profits, but for the good of the community. The store, in its turn, is guaranteed a loyal constituency.

In view of these advantages, it seems surprising that consumers' coöperation has not developed more fully in the United States. There are four reasons, however, for this lack of development. First, the country is so large and the interests of the various sections so diverse that it has not been possible to develop such a general movement as that in Great Britain. In the second place, in the modern American city, retail stores have been organized on a large basis, and a great many of the petty annoyances and petty profits of the old retail system have been eliminated. In the third place, in the retail business in America, private business has proved to have advantages in economy far above those possessed by the coöperative business. Finally, American producers are strongly organized, and in all probability, by refusing to sell goods, would attempt to crush out all cooperative undertakings.

*Coöperative production.*

Coöperative production is an association of persons for joint production, usually in the field of agriculture or manufacturing. In this experiment, the coöperating parties furnish their own capital, and the income from the sales of the products is divided among the coöperating producers. In America, various unsuccessful attempts have been made in this direction. For example, at one time, the "Sovereigns of Industry" had thirty manufacturing establishments with a capital of nearly half a million dollars. The "Knights of Labor" also attempted, usually unsuccessfully, to organize various productive enterprises, including boot and shoe companies, clothing companies, and tobacco factories. On the other hand,

experiments in productive coöperation in creameries have been quite successful. All through agricultural districts there exist such creameries, managed advantageously on a coöperative basis. With this exception, producers' co-operation in the United States is a practical failure. The reason for this failure is to be found in the difficulty of securing capital and good business management for such productive enterprises.

Although the advocates of coöperation regard it as a sure solution of many social problems, there seems at present in the United States little real basis for this belief. With the exception of coöperation in such enterprises as building and loan associations, assurance societies, and fraternal organizations, together with the successful consumers' coöperation in England and on the Continent, the coöperative system has furnished very little ground for belief that it will prove an immediate relief or an ultimate remedy for the improvement of the social condition of the worker. If coöperation is to furnish an adequate remedy, it must succeed in production; and there it has signally failed.

**Outlook for co-operation.**

**Modern Unionism.** — Because the "union" relies solely upon itself to improve labor conditions, it is the most distinctive instrument that labor employs for its betterment. Its real significance lies in the fact that it is democratic, not paternalistic, and represents a voluntary association of equals striving themselves to improve their own condition. While the union was originally an experiment and still possesses experimental features, the movement has grown to such proportions and represents such definite demands that, to-day, modern unionism is fast constituting an actual program for economic reform.

**Character of unionism:** *Its significance.*

Formerly, unions were local and affected only a particular trade. To-day, they are national and embrace representatives of many trades. In the attempt to nationalize the union, the movement was first begun in some one trade, such as that of typographical workers. Gradually, however, it extended to an attempt to organize all the workers of the country. Thus, in 1881, the American Federation of Labor was established, and it has succeeded in affiliating with it the majority of the trade unions of the United States. Its success in this great scheme for the organization of labor is due to the fact that it allows the local unions large powers of control and requires that only the greater questions be referred to the officers of the Federation.

*Its national character.*

A union which was composed of the workers of one trade, such as carpenters or bricklayers, was at first called a "trade union." Two great changes that have taken place in the last quarter of the nineteenth century have, however, made this term misrepresentative of present conditions. In the first place, through division of labor and specialization in industry, trades have been so split up that they no longer exist in their old forms. A man is no longer a cabinetmaker, but a "gluer," or a "lathe man." Then, again, the influx of large numbers of immigrants and the growth of a large class of common labor have made it necessary for the trade union, if it would succeed, to take into its membership men who are not skilled in any trade. For example, the union of the United Mine Workers of America includes miners, door tenders, dumpers, laborers, drivers, trackmen, and other men from various trades. Thus the old "trade" union has been transformed into the modern "labor" union with a distinctly industrial character.

*Its industrial character.*

At the present time, the demands of unionism are so clearly formulated that they may well be termed a definite program. The union's activities are directed chiefly toward the attainment of three ends, (1) higher wages, (2) shorter hours, and (3) better working conditions. It is also true that the union attempts to raise the level of intelligence among its members and to awaken in them a realizing sense of their responsibilities. However, the chief emphasis of the union is laid upon higher wages and shorter hours of work.

**Program of unionism:**

The effect of the organization of labor upon wages has already been discussed in the Theory of Wages. It was there seen that, through organizing, labor is able to develop strong monopoly power. Armed with this power of group monopoly, labor can, through the union, make its demands upon the employer and, by securing higher wages, better its condition. The union, through its monopoly power, is attempting to secure its proper share of the product of industry, and in some cases, as in the building trades, has met with marked success. However, in this direction the work of the union has only begun.

*Higher wages.*

Equally important is the demand of the union for shorter hours of work. This has been crystallized into the eight-hour-a-day slogan, which in some countries, especially Australia, has accomplished notable results. However, in the United States ten hours constitute the average working day, although many industries are on an eight-hour basis. Saturday half holidays are the rule in most of the cities and it is becoming more and more common to give short summer vacations. It is generally conceded that the legislatures have the right to regulate the working hours of children and numerous state laws have been

*Shorter hours.*

passed accordingly. In the case of women, the Supreme Court of the United States has recently decided that the labor of women can be regulated on the ground of the woman's physical inferiority. The labor of men cannot be regulated unless it can be definitely shown that the health and morals of the community are endangered by a continuance of such labor.

The reasons for this demand for shorter hours are perfectly obvious. In the first place, there is no longer any great necessity for long hours of hard work. In former days, when living was precarious, such a necessity did exist, and the tradition that life could not be maintained without hard work gradually grew up. To-day, labor is struggling to break down this tradition. Again, with a proper amount of leisure, it is possible to do much more efficient work. Shorter hours mean higher efficiency. Finally, the wide use of machinery in industry has not only made the output greater, but has also caused labor to become more monotonous and nerve-racking. As a relief from this monotony and strain, labor must be given more time for leisure and recreation.

While higher wages and shorter hours result in immediate advantages to labor, it is also important that the general conditions under which labor works should be improved. For this reason, the union makes every attempt to better the working conditions and the surroundings of labor. Through the efforts of the union, aided by philanthropists and social workers, legislatures have enacted many laws against child labor, sweatshops, and other industrial abuses. This legislation has proved of benefit, not only to labor, but also to the whole community. While, therefore, the main object of union-

*Better working conditions.*

ism has been to improve the working conditions of members of its own group, its benefits have frequently been enjoyed by labor in general.

**Weapons of unionism:**

What means, now, does the union employ to carry out this program of higher wages, shorter hours, and better working conditions? As a rule, there are three well-defined instruments in the hands of organized labor which it may use to accomplish its purpose, — (1) the trade agreement, (2) the strike, and (3) the boycott. These constitute a trio of powerful weapons.

*The trade agreement.*

The trade agreement, as the name signifies, is simply an agreement in a given trade or group of allied trades between the employer and the workers. The employer on his side makes a bargain with a committee representing the workmen on their side. The trade agreement is thus a collective bargain, and the great majority of industries in which unions exist are conducted under such collective bargaining. Of course, the success and effectiveness of this agreement depend largely on a solid body of union workers. For this reason, the union naturally desires a "closed shop," that is, an establishment in which only organized labor is employed. On the other hand, the employer may desire to be free in his choice of labor.

*The strike.*

When unavoidable friction occurs between the employer and the workers concerning the terms of a trade agreement, or some equally important matter, the union attempts to enforce its demand by means of the strike. The strike is an organized cessation of work initiated by the employees for the purpose of securing their terms, or of resisting those of the employer. It is a revolutionary measure and can be justified only by some most unusual condition of affairs. Because of its deep and widespread

consequences, this weapon should never be employed by the union except as an absolutely final resort to secure just demands.

The effects of the strike are threefold. In the first place it affects the worker. By means of it, he may be able to force the employer to grant higher wages, or shorter hours, or better working conditions. On the other hand, the strike may prove a calamity to the average worker. Wages stop at once and, while union men may be supplied with strike benefits, these are often inadequate to meet the demands of family life. Then, again, when work is resumed, oftentimes the leaders of a strike, and sometimes the strikers themselves, are not reinstated by the employer. If these men live in a small town, depending upon one or two industries, their position becomes quite precarious. Altogether, the strike offers to labor a very uncertain remedy.

To the employer, the strike involves serious consequences. Of course, it is true that should he win the strike he would secure more absolute control over his business and be able to decrease wages, lengthen hours, and impose his own working conditions. On the other hand, the enforced idleness of his plant entails great financial loss. In addition to this, much property is destroyed by violence. Again, if he loses the strike, the extra expense entailed by increased wages seriously handicaps the employer in renewing his business operations. For all these reasons, the employer is opposed to strikes.

Finally, strikes seriously affect the public; and, because of this fact, it is generally agreed that the public should be the final arbiter of disputes between labor and capital. A strike curtails production. The public, therefore, will have less to consume during the ensuing period. Then, too, as

in the case of the great Anthracite Coal Strike, a strike is often followed by an increase in prices which falls heavily upon the public. The strike also seriously menaces social welfare through destruction of property and violation of law.

*The boycott.*

In addition to the trade agreement and the strike, the union possesses still another weapon — the boycott. This is simply an organized refusal on the part of a group of persons to buy goods from another person or group of persons. It may be used by opposing business houses, but it is chiefly the weapon of the worker and of the public.

The boycott has four forms. In the simple boycott, a group of persons, who have been working for a certain employer, refuse to buy his products. In the compound boycott, the workmen directly interested in injuring the boycotted person enlist the coöperation of outside parties. This form of boycott is regarded as a conspiracy. The third form of boycott is negative in character and is known as the "fair list," or "white list." In the first case, the union periodical publishes a list of firms described as "fair" because they work under union hours, pay union wages, and employ union men. In the second case, the Consumers' League publishes a list of firms described as "white" because they do not violate factory laws or other rules agreed upon. The fourth form of boycott is the "unfair list," or, as it has been called, the "we don't patronize" list. In this case, the labor periodical actually publishes the names of firms that do not provide fair conditions for their employees and thus urges the public not to purchase their goods. The court has, in certain cases, prohibited the use of this form of boycott.

Armed with the strike and the boycott, and using the collective bargain to secure its end, modern unionism has made valiant attempts to raise wages and to bring about better working conditions. The success attending both these efforts has been widespread. However, because of the rise in prices, the advance in wages has been more apparent than real. On the other hand, an actual and permanent gain in the form of shorter hours and improved working conditions has resulted from union activities. But, while the results accomplished by unionism have been great and its outlook is generally favorable, yet the movement to-day is facing some serious problems. The use of the injunction and the recent restriction of the boycott handicap the union in its attempts to better working conditions. At the same time the growth of employers' associations on a national scale serves to weaken the union's power. When the unions organized on a national basis, the employers did likewise. Thus, the American Federation of Labor now faces the National Association of Manufacturers. So long as the union alone was organized on a national basis its power was almost unlimited. But, to-day, as a result of this national organization of employers, the union has lost some of its monopoly power. However, since both sides of an industrial controversy will now be obliged to rely more closely upon public support for final success, the ultimate effect of the power of the public may redound to labor's advantage.

**Outlook for unionism.**

TOPICS FOR CLASS DISCUSSION

1. What is consumers' coöperation?
2. What are the reasons for its success in England?
3. What are the reasons for its failure in the United States?
4. What is producers' coöperation?

5. Why has producers' coöperation generally failed?

6. What is the strength of the coöperative program? What is its weakness?

7. What steps would be necessary before coöperation could be generally established in the United States?

8. What economic forces led to coöperation among American farmers?

9. What has forced retail grocers into a kind of coöperation?

10. Explain the value of the collective bargain to the labor union.

11. How much justice is there behind the collective bargain?

12. What is the economic basis for the eight-hour day?

13. Is the eight-hour demand any more reasonable now than it was a hundred years ago?

14. What is the effect of an eight-hour day on the quality and quantity of the output?

15. What is the effect of pace setting on the product?

16. Why do men strike?

17. Is the "strike" spirit a good one for the community?

18. Can the "strike" spirit be eliminated?

19. On what grounds can the strike be justified?

20. What is a boycott?

21. Give some examples of boycotts.

22. Is the "boycott" spirit a good one?

23. If you were a wageworker, would you feel that your interests and those of your employer were essentially opposed?

24. Under what circumstances might trade unions be of distinct advantage to employers?

25. Should union activity be permitted to interfere with industry?

26. What is the significance of the entrance of the union into politics?

27. What would be the ideal outcome of the union movement in America?

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# CHAPTER XL

## The Program of Regulation

I. Development of regulation
   1. The individualistic attitude
   2. The social attitude:
      *a*. Necessity for regulation
      *b*. The present test
      *c*. The government's duty

II. Regulation through police power
   1. Its meaning
   2. Its application:
      *a*. Hours of work
      *b*. Sanitation:
         (1) Of factories
         (2) Of houses

III. Regulation of prices
   1. Principle of "cost price":
      *a*. Its meaning
      *b*. Its requisite
   2. Examples of regulation:
      *a*. Control of labor
      *b*. Revision of tariff
      *c*. Control of capital
   3. Outlook for regulation

**Development of Regulation.** — The western world of the late eighteenth and early nineteenth centuries was dominated by the idea of individual freedom. In philosophy, legislation, industry, religion — everywhere — the spirit of democracy had taken hold upon the people. This democracy, however, was essentially different from democracy as it is thought of at the

**The individualistic attitude.**

present time. The individual then, as now, was the factor of primary interest in social progress. Yet individual welfare, according to the view prevailing at that time, was to be secured through individual freedom. The policy of *laissez faire*, or "let alone," was rigorously enforced so that any activity of the individual was justified provided it did not interfere too seriously with the welfare of the remaining members of society.

The opening years of the twentieth century still reveal the presence of the spirit of democracy, yet in an essentially different form. The eighteenth and nineteenth century democracy commanded the government to leave the individual free to do as he pleased. But more than a hundred years of this individual freedom have shown, to the satisfaction of the great majority, that the eighteenth century *laissez-faire* philosophy often results in much evil. Society is not always justified in letting the individual take his course; because, if an individual has anti-social ideas and is left free to do as he pleases, society must suffer from his unrestricted freedom. The industrial monopolist believes that he should be "let alone," but from this point of view society does not agree with him. He is dependent upon society for his power and, like any trustee, must give an account of his stewardship.

**The social attitude:** *Necessity for regulation.*

Thus, at the beginning of the twentieth century, men are measuring proposed actions by the test of social welfare. The question which is raised is no longer one of individual initiative but of social justice. Does a man wish to engage in certain activities? What will be the effect of his act upon society? If it be socially harmful, then the act itself should be forbidden.

*The test.*

Under this spirit of social control the program of government regulation has developed with surprising rapidity. Jefferson, one hundred years ago, said, "That government is best which governs least." Now, however, it is regarded as government's duty to regulate the limits beyond which the individual may not pass and remain free from social punishment. Proceeding on this principle, society regulates rates, inspects factories, requires fire escapes, and in various other directions controls freedom of individual action.

*Government's duty.*

**Regulation through Police Power.** — The first attempts at general regulation by the government were made through its "police power." By police power is meant the authority to regulate individual action for the general good. Of course, government must protect its citizens. Men should not be wantonly murdered; property should not be unjustly appropriated; the public peace should not be unnecessarily disturbed. The activities of government in these directions are, therefore, included under its police power. But government may also exercise this power to protect, not only the safety, but also the health and morals of society.

**Its meaning.**

In pursuance of this legal doctrine, the work of women and children has been so regulated that their health and safety are conserved. For example, it is unlawful to employ children below a certain age in a factory because social welfare demands that children shall have a minimum of education before taking up the tasks of life. Women, too, are forbidden to work more than a certain number of hours per week; and employers are compelled to provide specified sanitary conveniences, because the courts have ruled that the health and safety of society

**Its application:** *Hours of work.*

depend upon these regulations. Thus far the police power has been applied in very minor forms to the activities of men, because men are presumed under the law to be free contractual agents and, as such, are responsible for the consequences of their acts.

*Sanitation.*

In recent years, the police power has been widely exercised in the regulation of sanitation. It is but a generation since houses and factories were constructed in any way that would suit the convenience or whim of the builder. Recent scientific investigations, which have made known the effects of bad air and lack of necessary sanitary conveniences upon workers in factories, led to factory legislation aimed directly at the evil of insanitation. While these measures have not in all cases been enforced, they exist on the statute books as an indication of legislative opinion on the subject of public health.

No less effective have been the efforts to regulate the sanitation of houses. Until recently it was generally believed that a man's house was his castle; that men had a right to privacy and freedom at home; and that the conditions there surrounding their lives were a matter of indifference to the public at large. Diseases spread, however, and diseases are bred in filthy houses and courts. In a densely settled neighborhood, it is a matter of much more than individual concern that a man has smallpox. Therefore, particularly in Europe, many efforts, in the form of city planning, have been made to improve living conditions. The size, air space, sanitation, and construction of houses are all subject to stringent regulation because of the generally recognized connection between such regulation and social welfare.

**Regulation of Prices.** — Another form of government regulation is the attempt, championed by Professor J. B.

Clark, to secure " cost prices." A " cost price " is a price equivalent to the cost of production, plus a reasonable profit. Therefore, according to this view, in the fixing of cost price no element of monopoly or special privilege should enter. Cost prices, Professor Clark maintains, are just prices. Accordingly, social justice demands that the consumer be given the benefit of modern discovery and inventions so that, when a device is perfected which lowers the cost of production, the price of the commodity in question should be proportionately reduced.

**" Cost price ": *Its meaning.***

Cost prices depend, of course, upon free competition. But we have seen that, as a matter of fact, prices are, to-day, often determined by monopoly power. Therefore, these two forces — competition and monopoly — come into conflict. Both cannot exist at the same time. Consequently if competition is to be restored and cost prices established, monopoly power must be regulated. That is to say, whenever monopoly attempts to fix prices, the government must interfere and reëstablish competition. The regulation of monopoly power thus becomes a requisite to the principle of cost price.

***Its requisite.***

Proceeding on this basis, the adherents of this school desire to regulate all forms of monopoly so that cost prices may be assured. If, for example, labor, through its monopoly power of organization, fixes too high a price for its services, it must be subjected to government regulation. No exception is to be made in its favor. When the union uses its weapons so effectively that it develops into a monopoly organization, it destroys that free competition upon which the adherents of this school believe the price of labor should depend.

**Examples of regulation: *Control of labor.***

The program of regulation, therefore, includes labor within its sphere of activity. It may readily be seen that this program is directly opposed to the teachings of those who advocate the development of monopoly power on the part of labor.

In the same way, the manufacturer must not be allowed to profit by monopoly power. Whenever an unfair advantage has been given him by reason of undue protection against foreign competition, the government must revise its former act. There is little doubt that prices are artificially raised by means of monopoly power given to the manufacturer through protective legislation. These prices are certainly not cost prices. Therefore, to restore the latter, the government must revise tariff acts and regulate the business of the manufacturer.

*Revision of tariff.*

This principle of government regulation has, however, as we have already seen, been chiefly applied to the control of great combinations of capital in the form of trusts and railroads. Enough has been said in previous chapters to indicate the character of these laws, and their desired effects. It is only necessary at this point to call attention to the fact that they are the most representative American attempt to apply the program of government regulation to the affairs of society. Whether this program is completely practicable will, in large measure, be determined by the ultimate effect of railroad and trust legislation. Thus far, both groups of legislation are in a formative stage, and the future is still in doubt.

*Control of capital.*

The program of government regulation is likely to succeed, (1) if competition can be maintained, and (2) if the departments of government represent the welfare of the majority of the people. According to the doctrine laid down by

the government regulationists, competition is absolutely necessary to the success of their program. But it is questionable, in the face of such great monopoly power growing everywhere around us, whether the old conditions of free competition can ever be restored. In fact, it is doubtful whether the principle of free competition is of more ultimate good to society than the development of monopoly power and a spirit of coöperation. However, both great political parties in this country stand for some form of government regulation. If these parties really represent the majority interests of their constituencies, they will, when in power, carry out this program in their behalf. In many instances, however, signs have not been wanting that special interests have influenced regulative legislation.

**Outlook for regulation.**

## TOPICS FOR CLASS DISCUSSION

1. What is the attitude of an advocate of government regulation toward competition?
2. Is there any rule for determining the limits of State interference?
3. What is the police power?
4. In what way does its exercise justify government regulation of industry?
5. Explain carefully under what circumstances a legal eight-hour day might be justified under the police power.
6. What is a "cost" price?
7. Is a cost price necessarily a just price?
8. What is the attitude of the government regulationist toward a tariff on wool? On antiques?
9. What control would the governmental regulationists exercise over capital?
10. Would an advocate of this program have the State fix rents?
11. What is the view of the advocates of this program on the subject of the "economies of combination"?

12. What is the attitude of an advocate of government regulation on the question of socialism?

13. What is the attitude of the adherents of this program toward monopoly?

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# CHAPTER XLI

## Programs of Socialization

I. The Single Tax
   1. Its object
   2. Its meaning
   3. Its advantages:
      *a.* Prevents land speculation
      *b.* Simplifies taxation
      *c.* Increases production
      *d.* Relieves poverty
   4. Basis of its position:
      *a.* Land different from property
      *b.* Land values social values
   5. Its outlook

II. State Socialism
   1. Its distinctive character
   2. Its growing importance
   3. Its chief criticisms of society:
      *a.* Exploitation of labor
      *b.* Growth of private monopoly
      *c.* Lack of equal opportunity
      *d.* Waste of effort
      *e.* Evils of competition
   4. Its leading principles:
      *a.* Government ownership advocated:
         (1) Its advantages
         (2) Its expected results
      *b.* Private property opposed:
         (1) Extent of opposition
         (2) Position of "capital goods"
   5. Its limitations
   6. Its future

Two other programs of economic reform depend for their success upon the action and support of government. Both of these may be described as programs of socialization. In the one, the aid of government is invoked in order that society as a whole, rather than particular individuals, may enjoy the benefits of the increased valuation of land resulting from social action. In the other, government is relied upon to bring about not only a socialization of land, — natural resources, — but also of capital, — the tools of production. The one is usually known as the Single Tax Theory; the other as State Socialism.

**The Single Tax.** — In his "Progress and Poverty," Henry George asks this question, "Why in spite of the increase in productive power do wages tend to a minimum which will give but a bare living?" Starting out with this query, George explains the coexistence of progress and poverty on the ground that the landlord class has appropriated as rent a great mass of wealth that should go to labor as wages, or to society as social income. He shows that the great increase in land values due to the growth of population (as evidenced by the fact that Manhattan Island alone in three hundred years increased in value one hundred million times) has gone, not to the people who created it, but has been appropriated by a few landlords in the form of an "unearned increment." Therefore, to restore this "unearned increment" to society and thus to do away with the poverty of the masses, Henry George proposed what is now universally known as the Single Tax.

**Its object.**

The Single Tax, to use Henry George's own words, is "One single tax levied on the value of land irrespective of the value of improvements in or on it." All machinery

of taxation would be done away with except that necessary to assess and tax land values. Hence the name " Single Tax." Now it must be distinctly borne in mind that this Single Tax means a tax on land itself,—not on any of its buildings or improvements. The tax is aimed solely at land values, and is thus an attempt to socialize the value of the land by turning over to the people the " unearned increment."

**Its meaning.**

The advantages claimed for the Single Tax are, first, that while it would be so high as to cover the full value of the bare land, it would not apply at all to the value of improvements upon land. Since these improvements would remain untaxed, there would be every inducement to make improvements. At the same time, since land itself would be taxed to its full value, there would be no inducement for land speculation. Nothing whatever would be gained by holding idle land. In this manner, while every encouragement would be offered land improvement, an effective blow would be given to land speculation. Our present system of taxation encourages land speculation by taxing unimproved land at a lower rate than improved land.

**Its advantages:** *Prevents speculation.*

Another advantage of the Single Tax is its simplifying effect upon the mechanism of taxation. The present land tax would be retained, but the intricate system of internal revenue and tariff collection would be abolished, and a great saving in the collection of taxes thus effected. Furthermore, there would be no chance to escape land taxation. Personal property may be concealed. Land, however, cannot be hidden from the assessor.

*Simplifies taxation.*

The Single Tax would also increase the productive capacity of the community. This is true because the aboli-

tion of taxes on industry (and the substitution of the Single Tax in their place) would free the active elements in production, — labor and capital. At the same time, this substitution would bring into use more land than is now available for productive purposes.

*Increases production.*

Finally, the Single Tax would relieve poverty by taking the " unearned increment " from the landlord and giving it to society. Then, since the Single Tax would fall most heavily on the cities where land values are greatest, the poorer agricultural districts could be relieved from the heavy burden of taxation.

*Relieves poverty.*

The advocates of the Single Tax argue, moreover, that it is just, because land is not like ordinary private property. As the earth was not made by man, but merely supplies a temporary dwelling place for generation after generation, the men born into the world have an equal right to the free gifts of nature. Therefore, the natural resources of a nation should be used for the benefit of the entire nation, and this condition of affairs can only be brought about by shifting the burden of taxation from the majority who do not hold land to the minority who do. Single Taxers believe that a tax laid on tools or any other creation of human labor violates a right of property, because it takes from the man who has created it part of the thing which he has made. The tax on land values, however, takes from individuals nothing that they have actually created.

**Its basis:** *Land different from property.*

Again, the value of land is not due to the work of man and therefore its value bears no relation to actual individual effort. The value which is created in the land as the result of the centralization of business in New York City is appropriated by a few indi-

*Land values social values.*

vidual land owners. This, maintain the Single Taxers, is manifestly unfair because they did not create the value of Manhattan Island nor are they responsible for increasing it. This socially created value should be used for the purpose of developing certain community interests. With these properly secured and safeguarded, poverty would be at a minimum by reason of a more equal distribution of the wealth of society.

Whether the amount derived from a land tax alone would be sufficient to meet all of the expenses of government is still a matter of legitimate dispute. That the Single Tax would abolish poverty or establish complete democracy is certainly improbable. The present system of taxation is unquestionably imperfect. Thus the Single Tax would doubtless prove a remedy for some of the chief defects of the present system. That it would prove a cure-all for social ills no thinking person can believe. The Single Tax principle has been applied in New Zealand, Vancouver, and in a somewhat modified form in England and parts of Germany. As a program, it has never been afforded an opportunity to demonstrate its effectiveness. However, present indications point to a time in the very near future when some of our Western States, as well as several of the more progressive European countries, will be seriously remodeling their taxing systems on the basis of the Single Tax theory.

**Its outlook.**

**State Socialism.** — While the Single Taxers hold to the socialization of natural resources as a means of securing social progress, another school of reformers — the Socialists — hold that, in order to attain social justice, not only natural resources, but also capital, must be socialized. Therefore the Socialist, in

**Its distinctive character.**

his program, proposes to socialize not only land, but also the tools of production included in capital.

The recent growth of Socialism is one of the important phenomena of modern times. In several European countries its growth has been so rapid that many believe it will eventually become a firmly established institution. Although the Socialist cause in this country musters but half a million votes, it has attracted to its ranks capable men from many walks of life. To many the word "Socialism" stands in the same category as "anarchy"; and that in the same category as "bomb throwing." Such confusion of thought is the mark of an untrained mind.

**Its growing importance.**

The objections which Socialism makes to the present order of society seem to group themselves under five headings. First, there is the belief in the universality of exploitation. Exploitation means that an individual receives less than he produces. According to the Socialist's use of the term, a day laborer, creating in a year $900 worth of value and receiving only $400 in wages, is being exploited by the capitalist to the amount of $500. In the eyes of the Socialist, exploitation is an inevitable result of a system which permits the private ownership of tools of production and the control of capital in such a manner that the owner of the machine becomes the master. It is to the interest of the tool owner to get the tool user to work at the lowest possible wage; hence exploitation eventually results.

**Its criticisms:** ***Exploitation of labor.***

The second criticism that the Socialist urges against the present system is that it permits the growth of private monopolies and offers no effective way to check them. Many fabulous fortunes, he asserts, have been made through the

monopoly control of articles of general consumption, — coal, meat, ice, and iron; or through the ownership of monopoly business, — street-car lines, telephones, railroads, gas, and water supply. The Socialist believes that it is hopeless and furthermore undesirable to endeavor to restore competition as a regulator of prices. As competition largely gave way to combination, so he believes State monopoly must succeed private monopoly.

*Growth of private monopoly.*

The third criticism offered by the Socialist is that society lacks a plan for the constructive development of all its parts. He sees chaos in the present arrangement. To him the world is a bundle of contradictions. In an age of plenty, he still sees the universal specters of poverty, ignorance, and crime. Although man has conquered his environment through harnessing the forces of nature, there are still underfed children, homeless men, imperfect sanitation, low pay, and lack of employment. Too often the welfare and happiness of many are dependent solely on the accident of birth. The race of life is unequal. Some start with such handicaps as a body undernourished from infancy, and a mind equipped with but the merest rudiments of education. These at thirteen or fourteen are destined to the life of a factory, while others have the possibility of a college diploma and the assurance of a social and business position.

*Lack of equal opportunity.*

The fourth criticism that the Socialist urges against modern society is its wastefulness. Competition is uneconomic; coöperation, economic. Under the competitive system much is done in duplicate and triplicate that could just as well, under a system of coöperation, be done but once. This is particularly true in the distribution of

*Waste of effort.*

goods for consumption. A half dozen competing hucksters, milkmen, and icemen pass over the same route daily when half that number might have distributed the same amount of goods had there been no competition.

A fifth criticism of the Socialist is against the essentially evil nature of competition. In industrial competition he sees a force that calls out all the bad in human nature, while at the same time it suppresses much that is good. To undersell their competitors and make a profit, men adulterate food, employ child labor, violate factory inspection laws, and pay low wages. Competition puts the law-abiding and humane employer at a disadvantage and forces the indifferent employer over into the camp of those who seek success at any price.

*Evils of competition.*

And so State Socialism, weighing the present organization of society in the balance and finding it wanting, comes forward with a plan built on an entirely different basis. It proposes to substitute for the private ownership of all land and capital goods, — factories, railroads, stores, and the like, — social ownership and operation. In this plan the Socialist sees many advantages. Under such a system there would be no capitalist to demand interest; all the returns of labor would go to labor, and exploitation would cease. As the government would own all the land and natural resources, there would be no monopolist's profits to be paid out of the pockets of consumers. Since competition would be destroyed, there would be no further incentive to adulteration of goods, to child labor, or to the violation of health and fire ordinances. In place of a society of competing units, each struggling to get the most for himself, State Socialism would substitute an orderly plan for the attainment of definite and

**Its leading principles:** *Government ownership advocated.*

uniform results. Every child would be guaranteed education and support at State expense, and every man in old age after his life work is over would be an honored pensioner of the government. Instead of working ten and eleven hours a day, the working day would be cut in half through the economies of coöperative action.

The Socialist believes that in many ways society has outgrown the institution of private property, just as much as it has outgrown the institution of property in individuals called slavery. He admits that both may have been valuable at a certain stage in the development of civilization, but asserts that that time is now passed. In attacking the institution of private property, it should be borne in mind that the Socialist opposes private ownership in land and the tools of production only. In common with the Single Taxer, the Socialist believes that the land is a gift to all, from the Creator, as free as air or water. He would, therefore, restore it to its original state. Arguing solely from the standpoint of expediency, he upholds that, if the best interests of society are served by a system of common ownership of its capital goods, there is no valid reason why such a system should not be put into operation.

*Private property opposed.*

The Socialist therefore goes one step beyond the Single Taxer. He would socialize capital as well as land. Would Socialism inaugurate the millennium? Certainly not. Men and women would still be dishonest, lazy, shiftless, and vicious under Socialism. Officials would steal; ambitious men would usurp power; demagogues would secure office. Socialism would not reform men — it might give them a chance to improve their condition. Under Socialism the productive machinery would

**Its limitations.**

be less efficient; there would be less opportunity for the genius to make his mark in industry; the whole mechanism of society might prove too great a burden for a government to carry successfully. One fact is obvious — neither Socialism nor any other scheme of social betterment can succeed until the standard of education is raised among the people.

In Germany, the Socialists cast more votes than any other political party. In Belgium, France, Italy, and England, Socialism has likewise gained a strong foothold. In the United States, although the number of Socialists is comparatively small, they have elected mayors, legislators, and other public officials. Thus the movement which was at one time openly ridiculed is now secretly feared. Its leading thought — the increase of social control — is steadily gaining ground. Everywhere, we find government taking on more authority and exercising greater power. Thus, while it is unlikely that the doctrines of State Socialism will be carried out in their entirety, it is equally likely that they will be applied in a modified form to the solution of many pressing problems.

**Its future.**

## TOPICS FOR CLASS DISCUSSION

1. What is "the full economic value of land" which Henry George would absorb by a tax?
2. Outline the arguments for and against the Single Tax.
3. What has the Single Tax accomplished as applied in New Zealand?
4. What is exploitation?
5. Of the bases of modern Socialistic thought, which appears to you to be the strongest?
6. Was Marx correct in assuming that labor is the sole cause of value in exchange?

7. Why has State Socialism had such a rapid rise in Germany?

8. What are the leading economic doctrines in the platform of the American Socialist party?

9. To what group in the community do the doctrines of Socialism make their strongest appeal?

10. Theoretically, which group in the community would be the chief gainer through Socialism?

11. Outline the best arguments in favor of Socialism.

12. Outline the best arguments against Socialism.

13. Is Socialism to be judged by its ideal or by its probable working?

14. What are the difficulties which you think the coöperative commonwealth would experience?

15. Do you think it possible for a government representing the workers to take over one great industry after another and to operate these great industries for the common welfare rather than for profits?

16. Does the Socialist urge equal distribution of wealth?

17. What are the forces making for Socialism in the United States to-day? What are the forces militating against Socialism?

18. Why is it not right to say of every public interference in industry that it is socialistic. When may a measure be called socialistic?

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# CHAPTER XLII

## Social and Economic Progress

I. Belief in progress
   1. What is progress?
   2. Its philosophical basis:
      *a.* Influence of environment:
         (1) The two forces
         (2) The old fatalism
         (3) The new optimism
      *b.* Belief in natural capacity:
         (1) The former attitude
         (2) The present belief

II. Requisites of progress
   1. The ideals:
      *a.* Opportunity
      *b.* Social adjustment
      *c.* Efficiency and education
      *d.* Leisure
      *e.* Recreation
      *f.* Health
   2. The method

At first glance the various experiments and programs for individual and social betterment seem to have little in common. From the benevolent attempts of the employer to improve the condition of his worker to the insistent demands of the Socialist for the social ownership of the tools of production, there are many varieties of proposals. But while these programs of economic reform show such diversity of thought and opinion, they nevertheless have a com-

mon basis. All rest upon the belief that economic and social conditions demand improvement, — all are programs of progress.

**Belief in Progress.** — After all, then, these diverse plans of economic reform have a unity of purpose, — a desire to better the condition of the worker. Their advocates, who believe absolutely in the attainment of progress, are sharply distinguished from those conservatives and reactionaries who believe that "Whatever is, is right." These progressives are not content with "well enough"; they are always striving for "something better." Progress is the goal of all their activities. But what is progress? It is the forward movement of all members of society, — not the mere advance of particular individuals. From an economic standpoint, progress is measured by individual and social welfare, and the test of this welfare is individual and social prosperity. Thus, progress is not only the goal of economic endeavor, but it is also the goal of economic reform.

**What is progress?**

What reason have men for believing that progress is possible? To answer this question, one must understand the character of the forces at work in shaping the destinies of life. Broadly speaking, these forces are those of heredity and environment. Every one's life is a product of these two forces. Man is thus a combination of inherited traits and acquired characteristics. But which of these two sets of forces is the dominating element in the life of man? One's attitude on this question determines one's philosophy of life. The advocate of progress bases his belief on the dominating influence of environment.

**Its basis:** *Influence of environment.*

The effect of the opposite view — that man's course is

determined by hereditary influences — is at once apparent. If this be true, progress is impossible in many cases. According to this belief, men may be born vicious and destined, by the laws of heredity, to remain so from generation to generation. This represents the old fatalistic attitude of the past. So long as men believed that the evils of the past were transmitted to the present, progress was practically impossible. There was no possibility of going into the past and influencing the parents of the present generation. This present generation, depraved because of the depravity of its ancestors, must in its turn hand on its low standards to the generations of the future. Thus the process would be endlessly continued through years of hopeless despondency. This old belief in hereditary depravity — in the transmission of acquired characteristics — kept society from properly educating the child, prevented normal care of the criminal and social outcast, and, in every direction, restricted individual and social progress.

The new view is full of hope and promise. The modern progressive has shaken himself free from the old fatalistic belief in the inheritance of acquired traits; and announces fearlessly that, since he believes that only race traits are inherited, the vast majority of evils which beset mankind is not the product of heredity, but is generated largely by the environment. This view, by emphasizing the fact that most men are normal, makes progress possible. It forms the basis of a new optimism and is characteristic of the attitude of the modern social worker. According to this belief, social and economic conditions may be improved simply by improving man's environment. The fundamental evil lies not in the individual, but in conditions surrounding him. If bad living and working conditions are largely respon-

sible for misery and vice, the surroundings of the worker must be improved. Instead of the past, the present must be investigated. Each generation starts afresh and, by improving its surroundings, may rise to a higher level than that reached by its predecessor. Thus progress is always attainable.

The other side of this conviction, that improvement in environing conditions will remove the cause of misery and vice, is expressed, of course, in the belief in man's natural capacity. These convictions are complementary. Man himself is believed to be thoroughly capable of improvement, and this belief furnishes a real basis for progress. This concept of the natural capacity of man dominates the thought of a progressive society. If people were born with a fatalistic curse upon their heads, if total depravity were an inherited thing — the product of the degeneracy of past ages — progress would hardly be possible. During the centuries when such ideas were held, little progress in the condition of the masses was made, because each person felt the impossibility of a forward movement. Recent years, however, have seen a distinct change in this respect. Thinkers now vigorously maintain the possibility of improvement; they have turned from the argument of "total depravity" to that of "universal capacity."

*Belief in natural capacity.*

**Requisites of Progress.** — If, then, man is capable of improvement and progressive development, what is required to call this forth? In the first place, he must be given opportunity. This was emphasized at the outset of our study and it is now restated in the closing pages. Equal opportunity, however, means neither equality nor identity. An embryotic painter and an embryotic engineer are neither equal nor

identical, yet both may be afforded an equal chance to develop their respective talents. Thus, equal opportunity means simply an equal chance to advance and is advocated, regardless of any particular program of reform, by all believers in progress. If, to-day, nine tenths of the men and women about us are born approximately normal and naturally capable, they will all make progress when given equal opportunity.

**The ideals:** *Opportunity.*

But something more than opportunity is essential to progress. Society needs adjustment. In order to secure this universality of opportunity which will permit of individual development, changes must be made in environing conditions. Families are underfed and badly housed; children are sent into the mills at fourteen; the school system is not planned primarily for the worker; and men die at an early age because of industrial accidents and preventable diseases. These maladjustments which are responsible for lack of opportunity must be swept aside. No conscious will has placed obstacles in the way of man's development; and through adjustment society itself must remove them wherever they exist.

*Social adjustment.*

Of equal importance with opportunity and adjustment is efficiency. Of course, if opportunity is afforded, efficiency will usually follow. In all directions the cry of efficiency is heard. If progress is to be attained, society as well as individuals must develop the capacity to produce maximum results with minimum outlays. In the factory, in the home, in the school, in the nation — everywhere — efficiency is equally essential. All programs of genuine progress emphasize this as one of the foundations of progress. Efficiency, of course, is attained through some form of education. Thus the economic importance of

*Efficiency and education.*

education becomes at once apparent. Efficiency, as we have previously seen, also involves conservation.

With opportunity, adjustment, and efficiency, come other ideals of progress. Chief among these are leisure, recreation, and health. Without free activity, progress is not possible. Individuals must have spare time in which to do those things that it is impossible to accomplish in the rush of industrial life. The great achievements of the world are often the products of leisure time. When men and women are educated to a wise use of free time, a shorter working day will prove of inestimable advantage to true progress. *Leisure.*

Along with the requisite of leisure comes the chance for recreation. To be progressive — to be able to move forward in the affairs of life — man must have some relief from the strain of industry. This is afforded through proper facilities for recreation. Thus, realizing that recreation is an ideal of true progress, municipalities every year appropriate large sums of money for playgrounds, parks, and recreation piers; while in many directions attempts are being made to regulate theatrical performances and moving picture exhibitions. At the same time, many efforts are directed toward providing some legitimate form of recreation for rural districts. *Recreation.*

Another ideal absolutely essential to progress is that of health. It is, in some respects, the most vital of them all. Without a strong, robust body, life is undesirable if not impossible. In every program of progress, therefore, full provision should be made to develop and maintain sound health. The social worker, to-day, realizes the necessity for this ideal more than any other reformer. *Health.*

Formerly, men believed that disease always came as a

punishment for wrongdoing and was an evidence of divine wrath. This was a remnant of the old fatalistic attitude. To-day, men have scientifically demonstrated that, not divine wrath, but germs and bacteria are the cause of disease. Malaria is not carried through the air in the form of vapor, but is transmitted through the sting of a mosquito. Remedy for malaria, therefore, takes the form, not of sacrifices to appease divine wrath, but of a generous application of crude oil to the marshes and ponds in which the mosquito breeds. Thus, science puts to rout the old fatalism, and helps in the cause of progress.

Concerning these ideals of progress all reformers are in practical accord. All would move in the same direction, with the same general end in view. It is not the end — the goal of progress — upon which social reformers differ; it is the means — the method of attaining their ultimate desire. But even here there is some agreement — some measure of unison. This manifests itself chiefly in one direction. It is generally admitted that progress should be attained, not through sudden revolution, but through gradual evolution. Sudden disturbances seldom effect permanent changes. Through the slow processes of time, extending over many generations and even centuries, progress is attained. To be sure, revolutions do occur; and when they do, they provoke thought and discussion. Nevertheless, no one can reasonably conceive of a social or economic revolution that in one generation would permanently change the methods of thought or motives of activity of all the people. The incoming of the factory system and the enunciation of Darwin's concept of evolution are good illustrations of revolutionary changes in economic belief and social thought. Yet, in both these

**The method of attaining progress.**

cases, the change in popular opinion required decades for its completion. So, inevitably, it must be with any fundamental change instituted in behalf of social and economic progress. Revolution is uncertain; evolution is unfailing.

## TOPICS FOR CLASS DISCUSSION

1. What is your idea of progress?
2. What part does the environment play in progress?
3. Why are modern thinkers optimistic?
4. What is meant by the expression "environment is plastic"?
5. What basis does the belief in natural capacity furnish for optimism?
6. What part will opportunity play in progress?
7. What measures are being taken to-day to prevent congestion of population? Premature employment?
8. What steps are being taken to accomplish a better distribution of population in this country?
9. What are some of the leading lines of activity in social work now being undertaken in America?
10. Which is more important, approximate equality of possessions or approximate equality of opportunity? Do we have to destroy the present in order to secure the latter?
11. With a more general diffusion of knowledge, culture, and publicity, is political democracy in more or less danger? Is equality of opportunity more or less likely to ensue?

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# INDEX


A

Accidents:
  causes of, 95.
  effects of, 98.
  kinds of, 95 *et seq.*
  number of, 96 *et seq.*
  remedy for, 95, 97.
Adjustment:
  meaning of, 5.
  requisite of progress, 351 *et seq.*
Agencies:
  land transportation, 190 *et seq.*
  water transportation, 73 *et seq.*
Agriculture:
  development of, 139 *et seq.*
  early methods of, 140.
  importance of, 141.
  kinds of, 142 *et seq.*
  training in, 144.
American foreign trade:
  exports, 243.
  imports, 243.
Animal life, 152 *et seq.*
Anti-Trust Act, 179.
Apportionment of taxes, see Taxation.

B

Banking:
  coöperation in, 317.
  operations of, 228, 229.
Barter, 223.
Bills of exchange, see Credit.
Book credit, see Credit.
Boss, 186.
Boycott:
  forms of, 326.
  meaning of, 326.
Burden of taxation, see Taxation
Business organization:
  early forms, 175.
  later forms, 175 *et seq.*
By-products, 170.

C

Capital:
  character of, 121 *et seq.*
  definition of, 122.
  efficiency and, 127, 136, 276.
  kinds of, 128 *et seq.*
  management of, 130, 238 *et seq.*
  origin of, 124 *et seq.*
  reward of, 274 *et seq.*
Capital good, 124.
Cereals, 142.
Checks, see Credit.
Child labor:
  consequences of, 105 *et seq.*
  extent of, 104.
  regulation of, 107.
China, 13 *et seq.*
Circulating capital, see Capital.
City life, 136.
Civilization, 47, 134.
Climate, 49, 50.
Clothing, 32, 35.
Coal:
  consumption of, 50, 51.
  danger from dust, 99, 100.
  supply of, 50.
Colonists:
  of Middle States, 83, 84.
  of North, 82, 83.
  of South, 84.
Combinations, see Corporations and Trusts.
Commerce:
  early restrictions on, 160.
  regulation of, 198 *et seq.*
Competition:
  and price, 211, 212.
  evils of, 344.
Conservation:
  of health, 12, 13, 81, 308 *et seq.*, 353, 354.
  of industry, 12.

Conservation:
of natural resources, 11, 53, 68, 76, 149.
Consumption:
coöperation in, 317 *et seq*
meaning of, 21.
principles of, 27 *et seq.*
productive and unproductive, 122.
Coöperation:
advantages of, 184.
and social surplus, 133 *et seq.*
experiments in, 317 *et seq.*
outlook for, 320.
stages of, 183.
Copper, 52.
Corn, 156.
Corporations:
advantages of, 176.
and finance, 232 *et seq.*
nature of, 176.
regulation of, see Trusts.
Cost of living:
differences in, 32, 33.
items in, 33 *et seq.*
Cost prices, 333.
Cotton gin, 139.
Cover crops, 149, 150.
Credit:
advantages of, 230.
kinds of, 226 *et seq.*
meaning of, 226.

D

Dairying, 143.
Dangerous trades:
chief source of danger, 99.
lead poisoning, 101.
remedy for, 100, 101.
Demand, see Supply.
Diet, 28, 313.
Differential rent, see Rent.
Differentiation:
in education, 116 *et seq.*
in industry, 184.
in labor, 183.
Direct taxes, see Taxation.
Dismal swamp, 60.
Distribution of wealth:
meaning of, 256.
outlook for, 296 *et seq.*
shares in, 256, 257.
theories of, 261 *et seq.*
Division of labor, 183.
Drainage:
extent in United States, 59.
method of, 59.
Duties, see Taxation.

E

Economic ideals, 9 *et seq.*, 352 *et seq.*
Economic life, 21 *et seq.*
Economic programs, see Programs.
Economic rent, see Rent
Economics:
meaning of, xiii.
study of, xiv *et seq.*, 1 *et seq.*
Education:
differentiation in, 116 *et seq.*
function of, 113, 114.
progress and, 352.
social surplus and, 135.
uniformity in, 114 *et seq.*
Efficiency, 9 *et seq.*, 352.
Electric traction:
rural, 195.
urban, 195.
Eminent domain, 192.
Entrepreneur:
grades of, 284, 285.
meaning of, 175, 282.
Environment, 349, 350.
Exchange:
bills of, 228.
meaning of, 209, 228.
method of, 223.
Excises, see Taxation.
Experiments:
in coöperation, 317 *et seq.*
in profit sharing, 306, 307.
in welfare work, 308, 309.
Exploitation, 258, 259, 342.
Exports, 243.
Express companies:
growth of, 193.
regulation of, 194.

F

Factory system:
advantages of, 163, 164.
disadvantages of, 165.
features of, 163.
Farming, 138 *et seq.*

Fatalism, 4, 350.
Fertility:
  exhaustion of, 146 *et seq.*
  restoration of, 148 *et seq.*
Fertilizers, 149.
Finance:
  evolution of, 232 *et seq.*
  modern method of, 234 *et seq.*
  results of, 237, 238.
Fixed capital, see Capital
Florida Everglades, 60.
Food, 32, 34.
Foreign trade, 243 *et seq.*
Forests:
  conservation of, 11, 12, 68.
  destruction of, 65 *et seq.*
  groups of, 63, 64.
Franchise monopolies, see Monopolies
Free capital, see Capital.
Free trade, 246, 249.
Fruit growing, 143.
Fuel, 33, 35.
Funds, see Finance.

G

Gas, 51, 52.
General property tax, see Taxation
Goods, see Economics.
Government ownership, 344, 345.
Government regulation:
  of railroads, 200 *et seq.*
  of trusts, 178 *et seq.*
  program of, 329 *et seq.*
Grades of:
  enterpreneurs, 284, 285.
  laborers, 290.
  land, 268 *et seq.*
Group monopoly, 298.

H

Health, 353.
Holding company, 178.
Hours of work:
  regulation of, 331.
  unionism and, 322, 323.
Humus, 147.
Husbands of industry, see Coöperation.

I

Ideals, 9 *et seq.*, 352, 353.
Illiteracy, 115.
Immigrants:
  character of. 90.
  groups of, 89.
Immigration:
  causes of, 88, 89.
  effect of, 89 *et seq.*
  restriction of, 92.
Imports, 243.
Income:
  inequalities in, 257 *et seq.*
  taxation of, 253.
Indirect taxes, see Taxation.
Individualism, 329, 330.
Industrial monopolies, see Monopoly.
Industry:
  accidents in, 95 *et seq.*
  character of American, 158 *et seq.*
  specialization in, 170, 184.
  women in, 107, 108.
Interest:
  nature of, 274 *et seq.*
  rate of, 276 *et seq.*
  source of fund, 278, 279.
International trade:
  basis of, 242.
  characteristics of, 243, 244.
  restriction of, 245.
Interstate Commerce Act:
  main provisions of, 200.
  modifications of, 202, 203.
Inventions:
  effect of, 162, 163.
  importance of, 140, 141.
Iron, 52.
Irrigation:
  act of 1902, 57.
  advantages of, 58.
  extent of, 57.

J

Japan, 14.

K

Knights of labor, see Coöperation.

L

Labor:
  character in the United States, 82 *et seq.*
  conservation of, 81.
  division of, 107, 183.

Labor:
education of, 113 *et seq.*
effect of immigration on, 91, 92.
groups of, 290.
importance of, 79, 80.
meaning of, 80.
monopoly power of, 292, 293, 297, 298.
of children, 104 *et seq.*
of women, 107, 108.
organization of, 185 *et seq.*, 297, 298.
problems of, 103 *et seq.*
risks of, 94 *et seq.*
Land:
and production, see Natural Resources.
and taxation, see Single Tax.
monopoly of, 258.
Large scale production:
advantages of, 169, 170.
disadvantages of, 171, 172.
nature of, 167, 168.
Legislation:
for railroads, 200 *et seq*
for trusts, 178 *et seq.*
Legumes, 150.
Leisure, 135, 353.
Liability, 176.
Light, 33.
Living:
cost of, 31 *et seq.*
standard of, 23, 24, 33 *et seq.*

M

Machinery:
development of, 160, 162, 163.
importance of, 140, 141.
Malnutrition, 109.
Manager, 185, 282.
Manufacturing, 160, 162, 163.
Manure, 148, 149.
Marginal rent, see Rent.
Market gardening, 144.
Minerals, 50 *et seq.*
Mining accidents, see Accidents.
Mississippi River, 75, 76
Mobility of labor, 299.
Money:
and capital, 123, 124.
and exchange, 223 *et seq.*
and price, 211.
Monopoly.
and labor, 297, 298.
and price, 214 *et seq.*
and railroads, 191.
and wages, 293.
kinds of, 216 *et seq.*
of capital, 258, 259.
of land, 258.
theory of, 262, 263.
Mormons, 56.

N

Natural capacity, 351.
Natural resources:
of China, 14, 15.
of United States:
agriculture, 49, 138 *et seq.*
forests, 62 *et seq.*
minerals, 50 *et seq.*
water, 69 *et seq.*
Niagara Falls, 71.
"No rent" lands, 268.
Notes, see Credit.

O

"One" crop system, 147.
Opportunity, 3 *et seq.*, 343, 352.
Optimism, 350.
Organization:
of business, 174 *et seq.*
of labor, 185 *et seq.*, 219, 220, 297, 298.
Organizer, 185, 282.
Overcapitalization, 238.
Overproduction, 243.

P

Panama Canal, 74.
Paper money, see Money.
Partnership:
advantages of, 175.
disadvantages of, 175.
nature of, 175
Petroleum, 51.
Philanthropy:
problems of, 310, 311.
program of, 312 *et seq.*
Police power:
application of, 331.
meaning of, 331
Pools, 177.
Population:
of China, 14.

Population:
of United States:
early character, 82 *et seq.*
later character, 85, 89 *et seq.*
Price:
and monopoly, 214 *et seq.*
and social surplus, 134.
and value, 206 *et seq.*
and wages, 41, 43.
how determined, 211, 212.
meaning of, 210.
regulation of, 332 *et seq.*
rise of, 43, 44.
Production:
coöperation in, 319.
factors of, 46.
large scale, 167 *et seq.*
of new species, 152 *et seq.*
Productivity, 261, 262, 291.
Profits:
law of, 284 *et seq.*
meaning of, 282.
nature of, 283, 284.
Profit sharing:
experiments in, 306, 307.
forms of, 305, 306.
meaning of, 305.
Programs:
of regulation, 329 *et seq.*
of socialization, 337 *et seq.*
of unionism, 322, 323.
Progress:
basis of, 349 *et seq*
method of, 354.
requisites of, 351 *et seq.*
Prosperity:
individual, 18.
national, 13 *et seq.*
Protection, see Tariff
Public land, 140
Public monopolies, see Monopoly.
Pueblos, 56.

Q

Quasi-public corporations, 191, 192.

R

Races;
characteristics of, 89, 90
effect on labor, 91, 92.
Railroads:
control of, 190, 200 *et seq.*
growth of, 190, 199.
importance of, 190.
nature of, 191.
Reclamation:
through drainage, 59, 60.
through irrigation, 56 *et seq.*
Recreation, 135, 313, 353.
Regulation:
of capital, 334.
of labor, 333.
of prices, 332 *et seq.*
of railroads, 200 *et seq.*
of trusts, 178 *et seq.*
Rent:
and standard of living, 32, 34.
kinds of, 268 *et seq.*
law of, 270 *et seq.*
meaning of, 265, 266.
single tax and, 338 *et seq.*
Requisites:
of managing ability, 282.
of production, 46.
of progress, 351 *et seq.*
Resources, see Natural Resources.
Risk:
and interest, 278.
and labor, 94 *et seq.*

S

Sanitation, 332.
Saving:
and interest, 275.
and social surplus, 137.
how capitalized, 125.
origin of, 125.
Selection:
artificial, 153.
effects of, 154 *et seq*
natural, 153, 154.
Sherman Act, 179.
Single tax:
advantages of, 339, 340.
basis of, 340.
future of, 341.
meaning of, 339.
Socialism:
character of, 341.
criticisms of, 342 *et seq.*
limitations of, 345, 346.

Socialism:
principles of, 344, 345.
Social surplus:
causes of, 133, 134.
effects of, 18, 134 *et seq.*
forms of, 17, 134.
meaning of, 132.
origin of, 17.
Social work, 310 *et seq.*
Societies, 204.
Soil:
conservation of, 149, 150.
exhaustion of, 147, 148.
Specialized capital, see Capital.
Standard of living:
elements in, 33 *et seq.*
meaning of, 23.
wages and, 37 *et seq.*
Standard prices, 244.
Steam engine, 140.
Stock raising, 143.
Stocks, 235.
Strikes:
effects of, 325.
meaning of, 324.
Substitution:
effect of, 215, 300
meaning of, 299.
Supply and demand:
of capital, 277.
of goods, 210
of labor, 291.
Swamp lands, 59, 60.

T

Tariff:
defect in, 253.
purpose of, 245.
revision of, 334.
Taxation:
and rent, 338 *et seq.*
federal, 249, 250.
kinds of, 249 *et seq.*
principles of, 251 *et seq.*
purpose of, 251.
state and local, 251.
Telegraph, see Transportation.
Telephone, see Transportation.
Trade:
development of, 241.
international, 242, 243.
restrictions on, 160, 245.
Trade agreement, see Unionism.
Trade unions, see Unionism.
Transportation:
electric traction, 194, 195.
express companies, 193, 194.
railroad, 190 *et seq.*
regulation of, 198 *et seq.*
telegraph, 193.
telephone, 193.
Trusts:
finance, 234.
forms of, 177, 178.
nature of, 177.
regulation of, 178, 179.

U

Unemployment:
causes of, 109.
effects of, 110
Unionism:
character of, 320, 321.
outlook for, 327.
program of, 322, 323.
weapons of, 324 *et seq.*
United States:
agriculture in, 138.
and China, 14.
business organization in, 174 *et seq.*
climate of, 49, 50.
forests of, 62 *et seq.*
industry in, 158 *et seq.*
labor in, 79 *et seq.*, 185 *et seq.*
minerals of, 50 *et seq.*
transportation in, 189 *et seq.*
wages in, 39 *et seq.*, 322.
water resources of, 69 *et seq.*
United States Steel Corporation, 236.
Utility:
and value, 207 *et seq.*
kinds of, 25, 26.
law of, 26, 27, 209, 210.
meaning of, 24.

V

Valuation:
of future, 277.
of present, 275.
Value:
and price, 210 *et seq.*
in exchange, 209.

Value:
in use, 208.
nature of, 207, 208.
Variety:
in consumption, 28, 29.
in new species, 154, 155.
Vegetable life, 155, 156.

W

Wages:
actual wages, 39, 40
and prices, 41, 43.
average wages, 42.
efficiency wages, 38, 40.
money wages, 289.
real wages, 289.
theory of, 288 *et seq.*
Wage worker:
semi-skilled, 186
skilled, 186.
unskilled, 187.
Wants:
kinds of, 24.
meaning of, 24.
Water:
for power, 70 *et seq.*
for transportation, 73 *et seq.*
Waterways, 12, 73, 74.
Wealth, xiii *et seq.*
Welfare, 2 *et seq.*
Welfare work:
forms of, 308, 309.
meaning of, 308.
origin of, 308.
Wheat, 156.
Women workers:
arguments against, 108.
arguments in favor of, 109
causes of, 107, 108.
Wood, see Forests.
World markets, 243

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